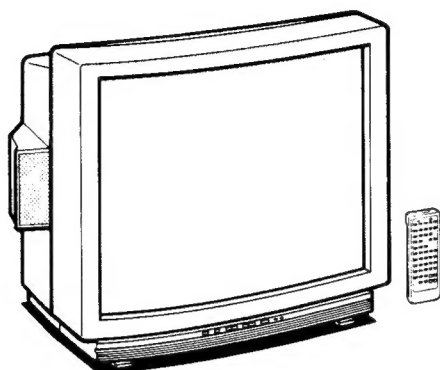


KV-27EXR20/27EXR25

RM-Y103 RM-Y104

SERVICE MANUAL



6783
US Model

KV-27EXR20

Chassis No. SCC-D50E-A

KV-27EXR25

Chassis No. SCC-D50F-A

Canadian Model

KV-27EXR25

Chassis No. SCC-D61C-A

ANU-2 CHASSIS

MODELS OF THE SAME SERIES

KV-27EXR20/EXR25

KV-27EXR10/EXR15

SPECIFICATIONS

Television system	American TV standards
Channel coverage	VHF: 2 — 13 UHF: 14 — 69 Cable TV: 1 — 125
Picture tube	Microblack™ Trinitron® tube 27-inch picture measured diagonally 28-inch picture tube measured diagonally
Antenna	75-ohm external antenna terminal for VHF/UHF
Input	VIDEO 1 and 2 IN S VIDEO IN (4-pin mini DIN) Y: 1 Vp-p, 75-ohms unbalanced, sync negative C: 0.286 Vp-p (Burst signal), 75-ohms Video (phono jacks): 1 Vp-p, 75-ohms unbalanced, sync negative Audio (phono jacks): 500 mVrms (100% modulation) Impedance: 47 kilohms
Output	VIDEO 2 OUT Video (phono jack): 75-ohms unbalanced, sync negative Audio (phono jacks): Impedance: 10 kilohms

AUDIO OUT (VARIABLE)
(phono jacks)
More than 408 mVrms at the maximum volume setting (variable)
Impedance: 5 kilohms

Speaker output 5 W x 2
Power requirements 120 V AC, 60 Hz
Power consumption

	Max.	Standby
KV-27EXR20	160 W	1.5 W
KV-27EXR25	165 W	

Supplied accessories

(KV-27EXR20)
Remote commander RM-Y103 with 2 size AA (R6) batteries (1)
(KV-27EXR25)
Remote commander RM-Y104 with 2 size AA (R6) batteries (1)
Antenna connector (1)

Recommended accessories

U/V mixer EAC-66
Connecting cable VMC-810/820S, YC-15 V/30 V
Video rack SU-275
Dimensions 659.0 × 594.3 × 508.5 mm (W × H × D)

Weight 49.0 kg

Design and specifications are subject to change without notice.



TRINITRON® COLOR TV
SONY®

6783

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(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.

THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK Δ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

(ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHASSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISE LORS DE TOUT DEPANNAGE.

LE CHASSIS DE CE RECEPTEUR EST DIRECTEMENT RACCORDE A L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MAPQUE Δ SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES CONT D'UNE IMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY. LES REGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRESENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTE.

SAFETY CHECK-OUT

(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line; the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

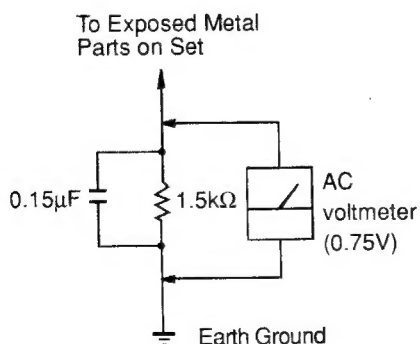


Fig. A. Using an AC voltmeter to check AC leakage.

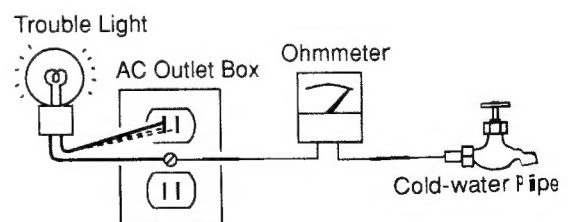
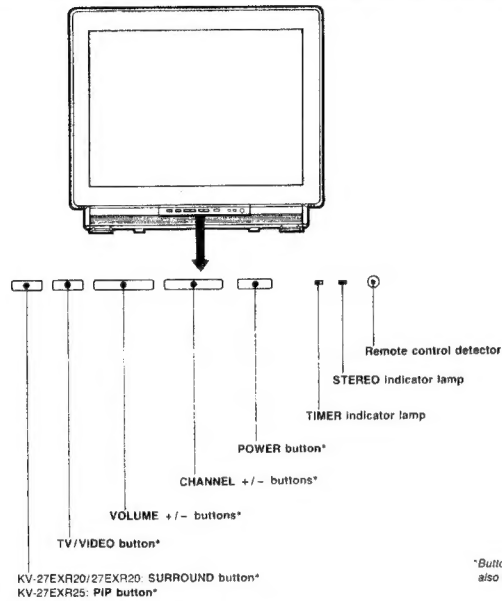


Fig. B. Checking for earth ground.

SECTION 1 GENERAL

1-1. LOCATION OF CONTROLS

Front panel



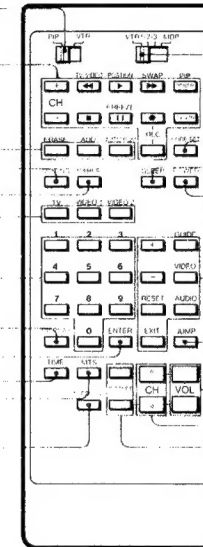
*Buttons with the same function are also located on the commander.

Universal Remote Commander

PIP/VTR (Picture-in-Picture or video) selector
(KV-27EXR25 only)
VCR/Sony multi disc player operation buttons **
(KV-27EXR25 only)
**Function as buttons for the Picture-in-Picture operations when PIP is selected (See page 8).
Channel presetting buttons
MUTING button
CABLE button
Input select buttons (TV/VIDEO 1/2)

Channel number buttons

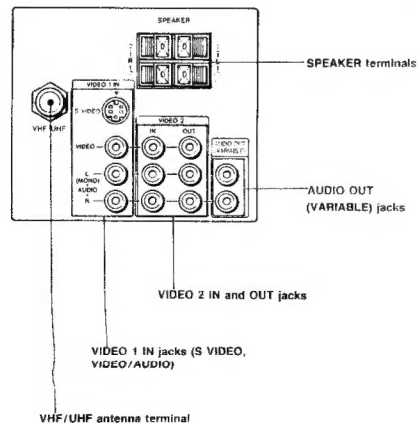
DISPLAY button
ENTER button
TIME button
MTS (multichannel TV sound) button
SURROUND button*
(PIP button*)



RM-Y104 (Y103)

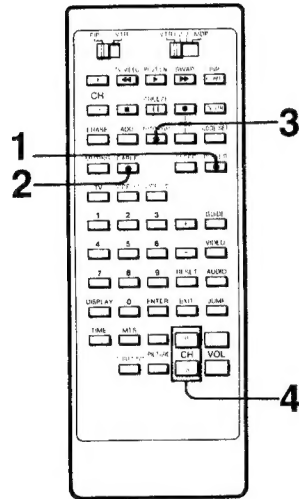
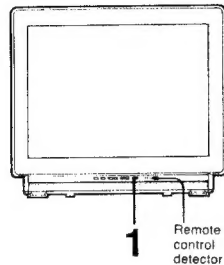
*Buttons with the same function are also located on the TV.
Note: Model KV-27EXR25 also has a PIP button on the TV, instead of a SURROUND button.

Rear Panel



1-2. PRESETTING TV CHANNELS

To Preset TV Channels Automatically



RM-Y104

Channels that can be received on this TV:

VHF: 2 - 13
UHF: 14 - 69
Cable: 1 - 125

- 1 Press POWER on the TV or the remote commander to turn the TV on.



- 2 Press CABLE so that the appropriate mode appears.



To preset VHF or UHF channels



To preset cable TV channels

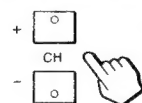
If "VIDEO 1" or "VIDEO 2" is displayed on the screen, press the TV/VIDEO button on the TV or the TV button on the remote commander so that a channel number appears.

- 3 Press AUTO PGM.



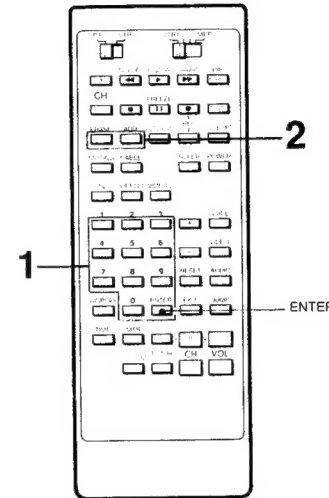
"AUTO PROGRAM" is displayed on the screen and receivable channels (other than the channels already preset) will be preset in numerical sequence. The channels previously preset remain in the TV's memory. When no more channels can be found, the programming stops and the lowest numbered channel is displayed.

- 4 Press CH +/- to check or view preset channels.



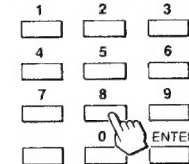
To add channels that could not be preset automatically because their signal strength was too weak, or to erase unnecessary channels, follow the steps in "To Preset Only Desired Channels or to Erase Unnecessary Channels."

To Preset Only Desired Channels or to Erase Unnecessary Channels



RM-Y104

- 1 Press the channel number button(s) and then press ENTER to select the channel you want to add or erase.



- 2 To add channels Press ADD.



A "+" appears before the number for a moment. This channel has now been added to the channel scan memory.

To erase channels Press ERASE.



A "-" appears before the number for a moment. This channel has now been erased from the channel scan memory. The next time you press the CH +/- button, this channel will be skipped.

Repeat steps 1 and 2 to add or erase other channels.

CAUTION

When a VHF or UHF channel is erased The cable TV channel with the same number is also erased, and vice versa.

Cable TV channel chart*

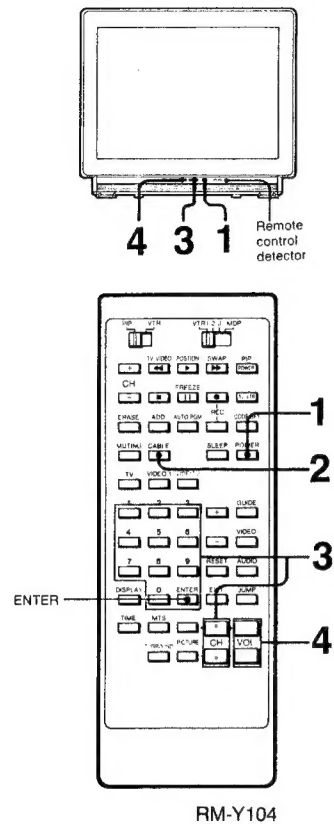
Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to the chart below.

Number on this TV	1	5	6	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Corresponding CATV channel	A-8	A-7	A-6	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q		
31	32	33	34	35	36	37	38	39		93	94	95	96	97	98	99	100	101	102			
R	S	T	U	V	W	W+1	W+2	W+3		W+57	W+58	A-4	A-3	A-2	A-1	W+59	W+60	W+61		W+82	W+83	W+84

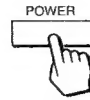
Check with your local cable TV company for more complete information on the available channels.

*This designation of cable TV channels conforms to the EIA/NCTA recommendation.

1-3. WATCHING TV PROGRAMS



- 1 Press POWER on the TV or the remote commander to turn the TV on.



- 2 Press CABLE so that the appropriate mode appears.



To view VHF or UHF channels

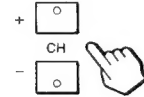


To view cable TV channels

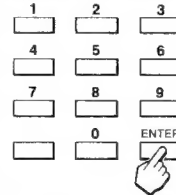
If "VIDEO 1" or "VIDEO 2" is displayed on the screen, press the TV/VIDEO button on the TV or the TV button on the remote commander so that a channel number appears.

- 3 Select a channel in one of the following two ways:

To scan the preset channels* in numerical sequence, press CH +/-.

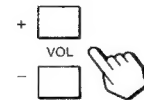


To select a channel directly, press the channel number button(s) and then ENTER. For example, to select channel 10, press 1, 0 and ENTER.



*For more on presetting channels, see p. 5.

- 4 Press VOL + or - to adjust the volume.



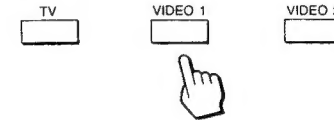
To turn off the TV
Press POWER on the TV or the remote commander again.

1-4. ADJUSTING PICTURE AND SOUND QUALITY

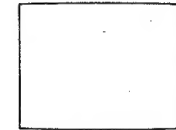
You can set different picture and sound quality levels for each input mode by changing the input mode (TV/VIDEO 1/2) before setting. These settings will be retained even when you turn the TV off.

Adjusting the Picture

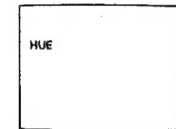
- 1 Select the input mode you want to adjust with the TV/VIDEO 1/2 buttons.



- 2 Press VIDEO.



- 3 Press VIDEO repeatedly until the quality you want to adjust blinks.



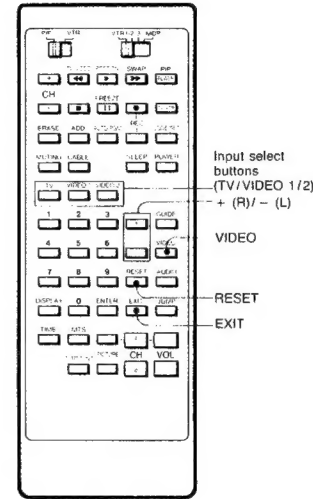
- 4 Press + (R) or - (L) to make the adjustment.



Picture quality	Press - (L) button	Press + (R) button
HUE	Skin tones become purplish	Skin tones become greenish
COLOR	For less color intensity	For more color intensity
BRIGHT	For less brightness	For more brightness
SHARP	For less sharpness	For more sharpness

The display will disappear automatically after a few seconds.

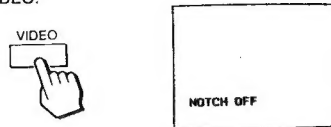
The SHARP Control has no effect with a window picture.
(PIP function — KV-27EXR25 only)



RM-Y104

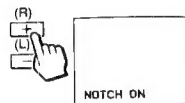
NOTCH filter setting

Press VIDEO.



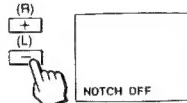
Normally, set to NOTCH OFF.
If dots or stripes appear while you are watching an image from a computer or video source, set to NOTCH ON.

To set NOTCH filter ON.



Press +.

To set NOTCH filter OFF.



Press -.

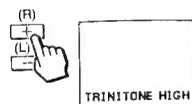
TRINITONE adjustment

Press VIDEO.



Color picture tubes are usually manufactured with a fixed color temperature (tint) that determines the "warmth" (red tint) or "coolness" (blue tint) of the picture. With Sony's Trinitone feature, you can adjust the picture color to your preference.

For bright white



TRINITONE HIGH
The factory preset whiteness level will be restored.

For soft white



TRINITONE LOW
A touch of red will be added to the white areas.

Picture Contrast adjustment



Press to increase picture contrast with vivid color.

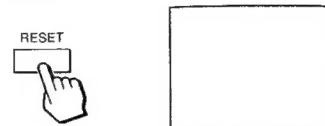
Press to decrease picture contrast with soft color.

Note

The picture contrast level cannot be stored under each input mode.

To restore the factory (mid-level) settings

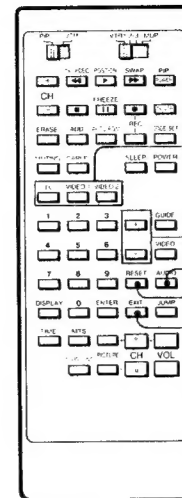
Press RESET.



The display will disappear after a few seconds.

To restore the normal picture
Press EXIT.

Adjusting the Sound



RM-Y104

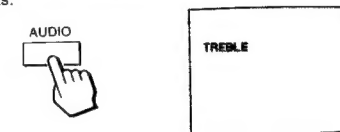
1 Select the input mode you want to adjust with the TV/VIDEO 1/2 buttons.



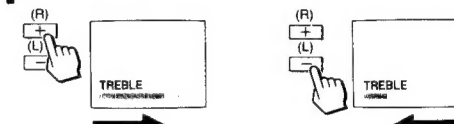
2 Press AUDIO.



3 Press AUDIO repeatedly until the quality you want to adjust blinks.



4 Press + (R) or - (L) to make the adjustment.



Sound quality	Press - (L) button	Press + (R) button
TREBLE	To decrease treble response	To increase treble response
BASS	To decrease bass response	To increase bass response
BALANCE	To emphasize the left speaker's volume	To emphasize the right speaker's volume

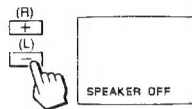
The display will disappear automatically after a few seconds.

SPEAKER ON

Press AUDIO.



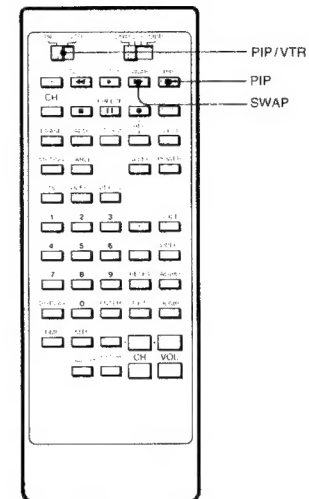
To use the speakers connected to the SPEAKER terminals.



To use an audio system connected to the AUDIO OUT jacks.

To restore the factory (mid-level) settings

Press RESET.

*The display will disappear after a few seconds.***To restore the normal picture**
Press EXIT.**1-5. USING PICTURE-IN-PICTURE (KV-27EXR25 ONLY)****Picture-in-Picture controls**

RM-Y104

This function is included only with model KV-27EXR25.

Besides the main picture, you can watch a video source simultaneously as a window picture.

For example, use Picture-in-Picture when you want to watch a TV program and also a video source from connected equipment (VCR, video disc player, etc.). If you connect a VCR, you can watch two different TV programs at the same time.

**Note**

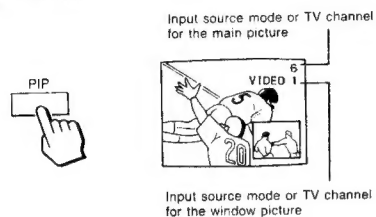
If the main picture is blocked, Picture-in-Picture does not function. Press EXIT to cancel CHANNEL BLOCK.

To display a window picture — PIP

- 1 Set the PIP/VTR selector to PIP.



- 2 Press PIP.



A window picture will appear in the same mode as the last time you used PIP.

Picture-in-Picture also functions when the main picture is in the VIDEO mode.

To make the window picture disappear
Press PIP again.

To scan channels in the window picture
Press CH +/– on the remote commander.

To change the input mode of a window picture

Press TV/VIDEO on the remote commander. Each time you press this button, TV, VIDEO 1 or VIDEO 2 mode will be selected in sequence.

Notes on the sub picture

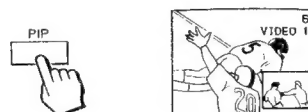
- You cannot hear the sound of the window picture channel.
- If a window picture is blocked, the "BLOCKED" display will appear on the main screen.

To swap the main and window pictures — SWAP

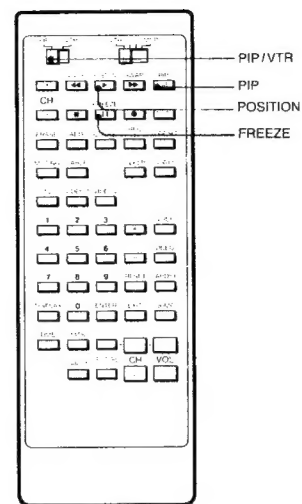
- 1 Set the PIP/VTR selector to PIP.



- 2 Press PIP to display a window picture.



- 3 Press SWAP.



RM-Y104

To change the position of the window picture — POSITION

- 1 Set the PIP/VTR selector to PIP.



- 2 Press PIP to display a window picture.



- 3 Press POSITION.
Each time POSITION is pressed, the window picture will move counterclockwise on the screen as illustrated.



To freeze a window picture

- 1 Set the PIP/VTR selector to PIP.



- 2 Press PIP to display a window picture.



- 3 Press FREEZE.
The window picture will freeze.
Use this feature when you want to write down the recipe of a cooking program or a displayed toll free number, etc.



To restore the normal picture
Press FREEZE again.

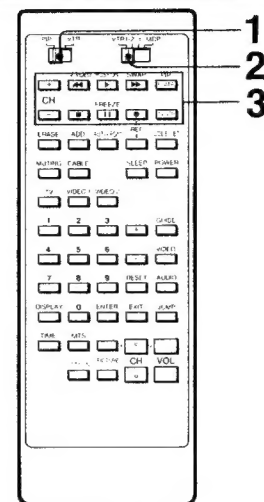
Note

The broadcast will be progressing normally while the still picture is on the screen.

1-6. USING THE UNIVERSAL REMOTE COMMANDER

You can operate other video equipment that has an infrared remote detector with the supplied RM-Y104 or RM-Y103 remote commander.

Operating Sony Video Equipment



RM-Y104

Caution

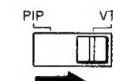
When you replace the batteries, do it within approximately 30 minutes. Otherwise, Sony settings and all of the settings you made under the Pre-Programmed function may be erased.

Notes

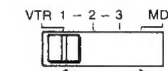
- If you use only Sony video equipment with your TV, you can operate that equipment following the steps on this page only. However, if you use other makers' video equipment as well as Sony's, please follow the steps instead (Pre-Programmed function).
- If the video equipment does not have a certain function, the corresponding button on this remote commander will not operate.

With the supplied remote commander, you can operate Sony video cassette recorders (Beta, 8 mm, VHS) and multi disc players by following the steps below.

- 1 Set the PIP/VTR selector to VTR.
(KV-27EXR25 only)



- 2 Set the VTR 1/2/3/MDP selector according to the video equipment you want to operate.



If you want to operate a:	set to:
Beta, ED Beta VCR	VTR 1
8 mm VCR	VTR 2
VHS VCR	VTR 3
Video disc player	MDP

- 3 Use the video operating buttons to operate video equipment.

Operating a Video Cassette Recorder

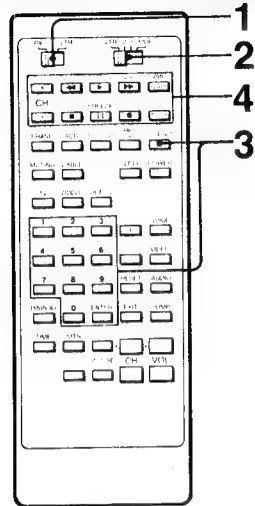
To record	Press
To play	Press
To stop	Press
To fast forward	Press
To rewind the tape	Press
To freeze a picture	Press
	To resume normal playback, press again.
To search the picture forward and backward	Keep pressing or during playback.
	To resume normal playback, release the button.

Operating a Video Disc Player

To play	Press
To stop	Press
To freeze a picture	Press
	To resume normal playback, press again.
	*This function is effective only for CAV (standard-play disc). With CLV (extended-play disc), the projector will go into the standby mode if is pressed.
To search the picture forward and backward	Keep pressing or during playback.
	To resume normal playback, release the button.

1-7. USING THE GUIDE FUNCTION (on-screen menu)

Operating Non-Sony or Sony Video Equipment (Pre-Programmed Function)



RM-Y104

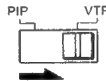
Manufacturers and Code Numbers (VCR)

MANUFACTURER	CODE
SONY	01, 02, 03
EMERSON	22, 28, 30, 33
SHARP	13, 14
RCA	07, 08
HITACHI	07
FUNAI	29
MAGNAVOX	05, 06, 09
mitsubishi	18, 19, 26, 27
PANASONIC	05
GENERAL ELECTRIC	05
JVC	16
GOLDSTAR	25
TOSHIBA	20, 21
SYLVANIA	05, 06, 09
ZENITH	17
SANYO	11, 15
QUASAR	05
NEC	16, 23, 31
PHILIPS	05, 06, 09
TOTE VISION	25
SAMSUNG	24, 32
SYMPHONIC	29
FISHER	10, 11, 12
TEKNIKA	28, 29
CANON	05
PHILCO	05, 06
SCOTT	21
MULTITECH	29

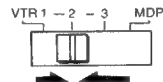
With the supplied remote commander, you can operate non-Sony or Sony video equipment as shown below.

Example: To operate an RCA video cassette recorder when you set the VTR 1/2/3/MDP selector to VTR 2.

- 1 Set the PIP/VTR selector to VTR.
(KV-27EXR25 only)



- 2 Set the VTR 1/2/3/MDP selector to VTR 2.

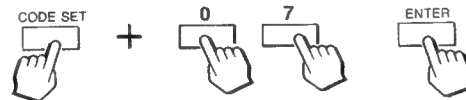


You can use the VTR 1/2/3 settings, but not MDP.

By employing these three settings, you can use your remote commander to operate up to 3 pieces of equipment.

To use a Sony VTR, set the selector to a position not being used for your Sony video equipment.

- 3 While pressing CODE SET, press the number buttons for your manufacturer's code number (see chart). For RCA, press 0, 7 and ENTER.

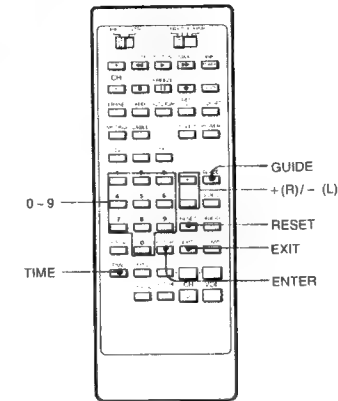


Now you can operate the video equipment with the supplied remote commander.

Notes

- If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.
- If you enter a new code number, the code number previously entered at that setting will be erased.

- 4 Use the video operating buttons to operate video equipment.

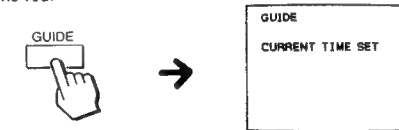


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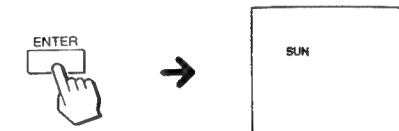
Setting the Clock

Example: To set the clock to 5:30 PM, Monday.

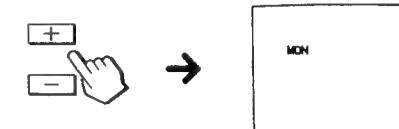
- 1 Press GUIDE.
Press repeatedly until the "CURRENT TIME SET" display turns red.



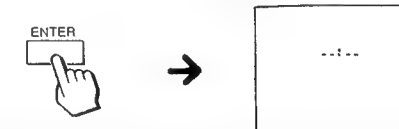
- 2 Press ENTER.



- 3 Press +/– until the desired day of the week appears.

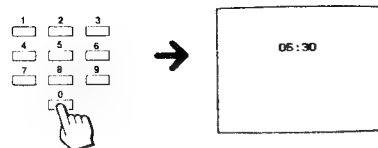


- 4 Press ENTER.
If the time is already set, the current set time will appear.
To clear these numbers, press any number.

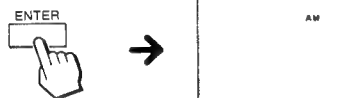


- All settings will be erased from the TV's memory if the TV is unplugged, or if power failure occurs.
- The ON/OFF TIMER and CHANNEL BLOCK will operate only if the clock is set correctly.

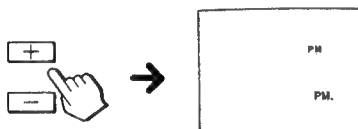
- 5** Press 0 – 9 to set the desired time.
(For 5:30, press 0, 5, 3, 0.)



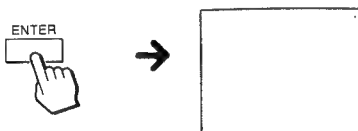
- 6** Press ENTER.



- 7** Press +/- to set AM or PM.



- 8** Press ENTER.
The moment ENTER is pressed, the clock will start.
A display will appear indicating that the clock has been set, and will disappear after about 5 seconds.



To restore the normal picture
Press EXIT.

To clear the current time setting
Display the "CURRENT TIME SET" page and press RESET, then EXIT.

To reset the setting
Display the "CURRENT TIME SET" page and press RESET, then repeat steps 3 to 8.

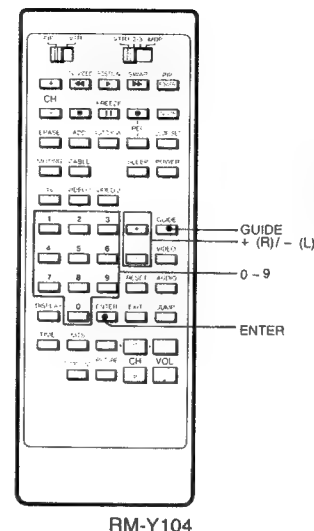
To display the current time
Press TIME.

Notes

- The internal clock of this TV operates on a 12-hour cycle. If a 24-hour cycle number is entered, it will be cleared when ENTER is pressed.

12:00 AM stands for midnight.
12:00 PM stands for noon.

- The internal clock returns to the factory-set condition if the TV is unplugged, or if a power failure occurs. Reset the current time.

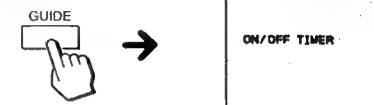


Setting the ON/OFF Timer

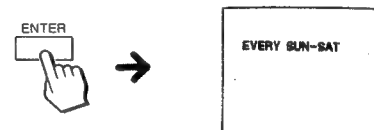
Set the ON/OFF timer to make the program of your choice appear on the screen at the chosen time.

Example: Set the timer to turn on the TV to channel 8 at 1:00 PM, for 3 hours every Monday through Friday.

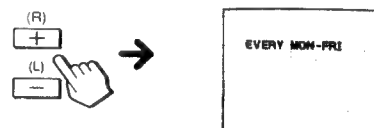
- 1** Press GUIDE.
Press repeatedly until the "ON/OFF TIMER" display turns red.



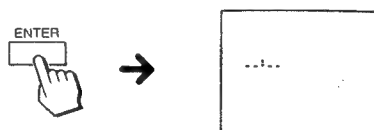
- 2** Press ENTER.
Instructions for selecting the day appear.
(If the clock has not been set, "PLEASE SET CURRENT TIME FIRST" appears on the screen. Go back to page 11 — Setting the Clock.)




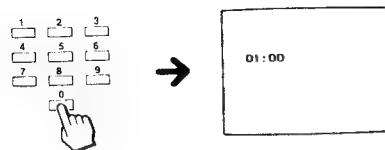
- 3** Press +/- until the desired day of the week appears.



- 4** Press ENTER.
Instructions for setting the time appear.



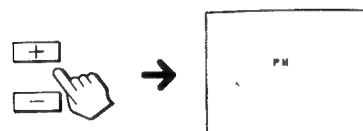
5 Press 0 —  to set the desired time.
(For 1:00, press 0, 1, 0, 0.)



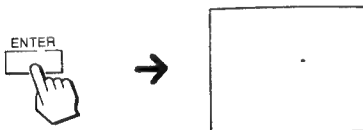
6 Press ENTER.



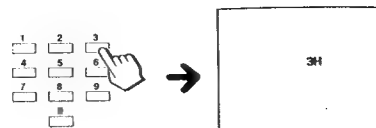
7 Press $+/-$ to set AM or PM.



8 Press ENTER.



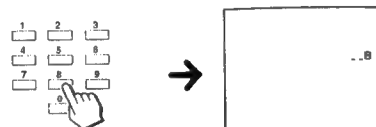
9 Press \blacksquare channel number button to set the duration. (Up to 9 hours can be set.)



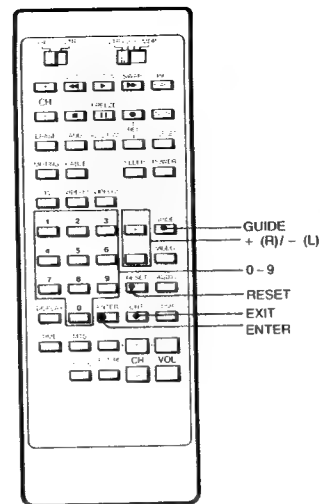
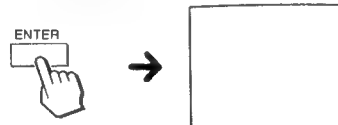
10 Press ENTER.



11 Press 0 — 9 to set the desired channel number.



12 Press ENTER.
The ON/OFF timer is set.
The TIMER indicator on the TV lights up.



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To restore the normal picture
Press EXIT.

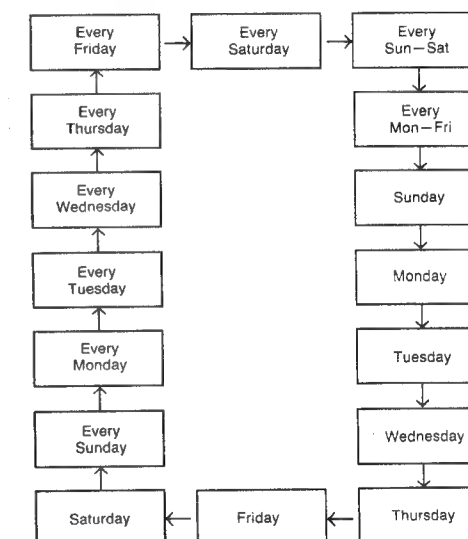
To clear the setting
Display the "ON/OFF TIMER" page and press RESET, then EXIT.

To reset the setting
Display the "ON/OFF TIMER" page and press RESET, then repeat steps 3 to 12.
The "TIMER WILL BE OFF" indication will appear one minute before the timer goes off.

Notes

- Power back-up is not available. Both the clock and timer settings will be erased if a power failure occurs. Reset the current time, then set the timer.

- The selectable days will appear in the following order when you press [+]:



Press [-] to move in the reverse direction.

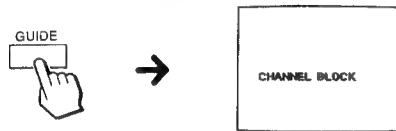
1-8. ENJOYING OTHER USEFUL FEATURES

Setting CHANNEL BLOCK

CHANNEL BLOCK prevents a channel from appearing on the screen during the preset time. We suggest you use this function to prevent children from watching undesirable programs.

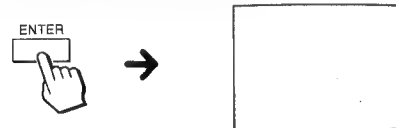
Example: Set CHANNEL BLOCK at 4:00 PM (for 1 hour), every Saturday, on channel 12.

- 1** Press GUIDE.
Press repeatedly until the "CHANNEL BLOCK" display turns red.



Steps 2 -- 11: Same as Setting the ON/OFF Timer.
(See page 12.)

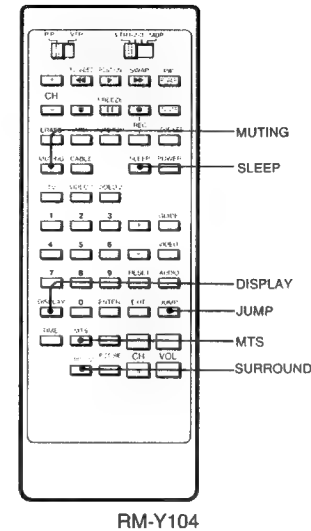
- 12** Press ENTER.
CHANNEL BLOCK is set.
At the preset time, the picture of the selected channel will be blocked from view and the sound will be muted. A red "BLOCKED" display will appear on the screen while the channel is blocked.



To restore the normal picture
Press EXIT.

To clear the setting
Display the "CHANNEL BLOCK" page and press RESET, then EXIT.

To reset the setting
Display the "CHANNEL BLOCK" page and repeat the steps from the beginning.



Muting the sound — MUTING

1. Press MUTING.
2. The display "MUTING" will appear on the screen.
3. To restore the sound, press MUTING again, or press VOL +.

Keeping the channel displayed — DISPLAY

TO DISPLAY the channel: Press DISPLAY.
All the current displays will appear for a few seconds, then disappear. The channel display will remain on the screen.

TO CANCEL the display: Press DISPLAY again.
The channel display will disappear.

Receiving a Multichannel TV Sound program — MTS

Each time you press MTS, the MAIN, SAP (Second Audio Program) and MONO modes are selected in sequence. The display (in green) for each mode will appear on the screen for a few seconds.

(NOTE: During SAP modes, the sound of non-SAP programs will be muted.)

TO LISTEN TO STEREO SOUND:

1. Press MTS to select the MAIN mode.
2. The MAIN display will appear on screen.
3. The STEREO indicator lamp on the TV will light up whenever a stereo broadcast is received.

NOTE: A weak incoming signal may cause excessive noise with some stereo broadcasts.

Switch to MONO mode to eliminate this noise.

Listening to surround sound — SURROUND

TO SET: (Gives a surround sound effect to stereo broadcasts and external stereo sources)

1. Press SURROUND.
2. The "SURROUND" display will appear on the screen for a few seconds.

TO CANCEL: Press SURROUND again. The "SURROUND" display will appear for a few seconds.

Using the sleep timer — SLEEP

TO SET: (Turns TV off automatically about 1 hour after setting)

1. Press SLEEP.
2. A green "SLEEP ON" display appears for a few seconds.
3. A red "SLEEP" display will appear 1 minute before the TV shuts off.

TO CANCEL:

Press SLEEP again.

A green "SLEEP OFF" display appears for a few seconds.

OR

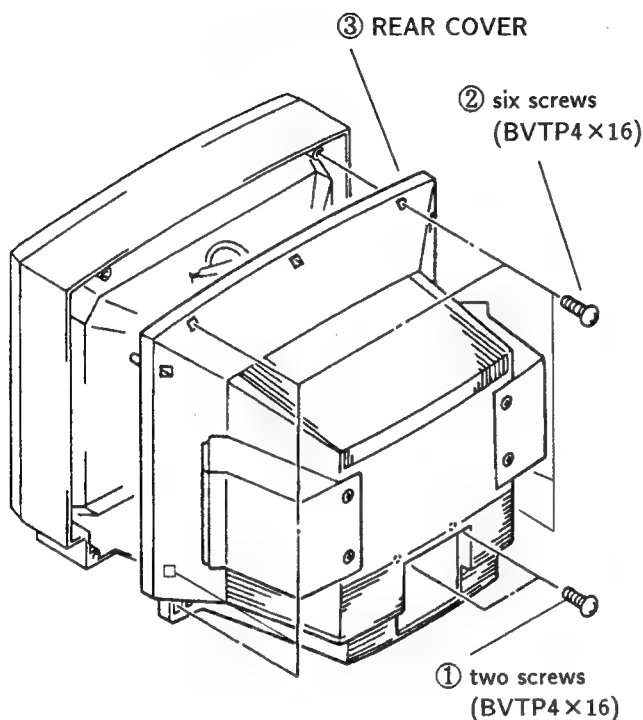
Turn the TV off. The sleep timer setting will be cancelled.

Switching quickly between 2 channels — JUMP

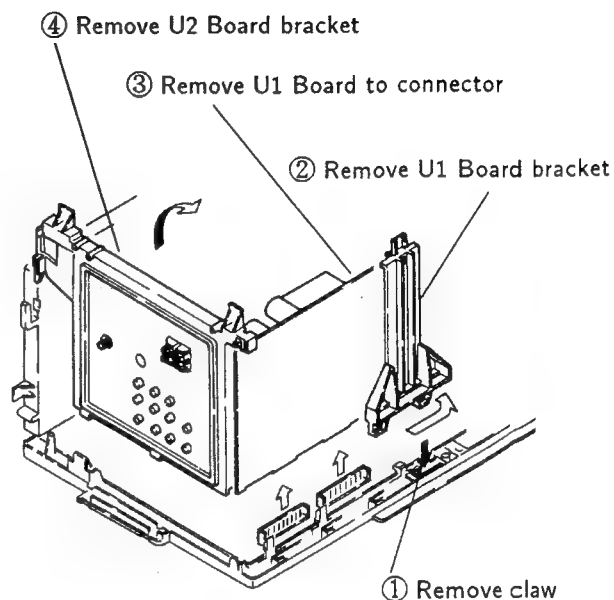
Each time you press the JUMP button, the channel which appeared on the screen immediately before is recalled. Use this feature to keep track of two programs alternately.

SECTION 2 DISASSEMBLY

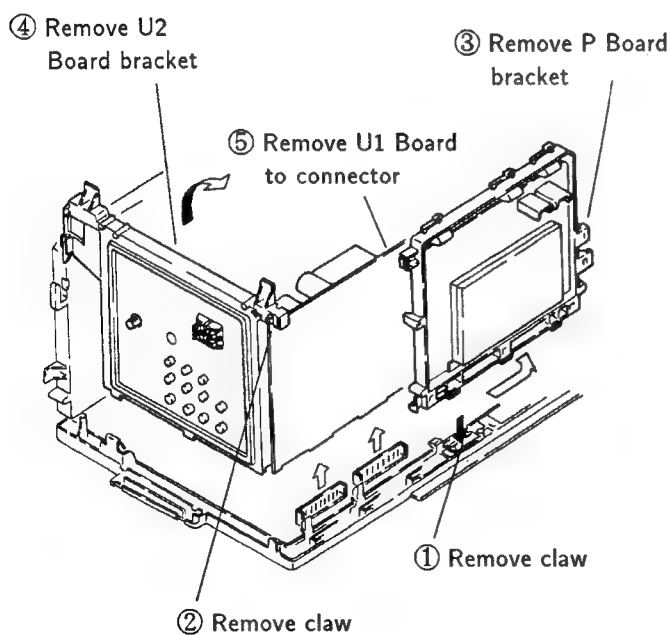
2-1. REAR COVER REMOVAL



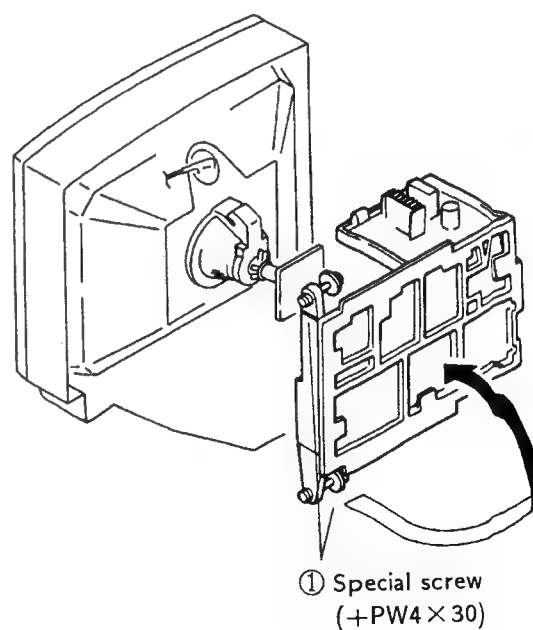
2-2. U1 BOARD AND U2 BOARD REMOVAL (KV-27EXR20)



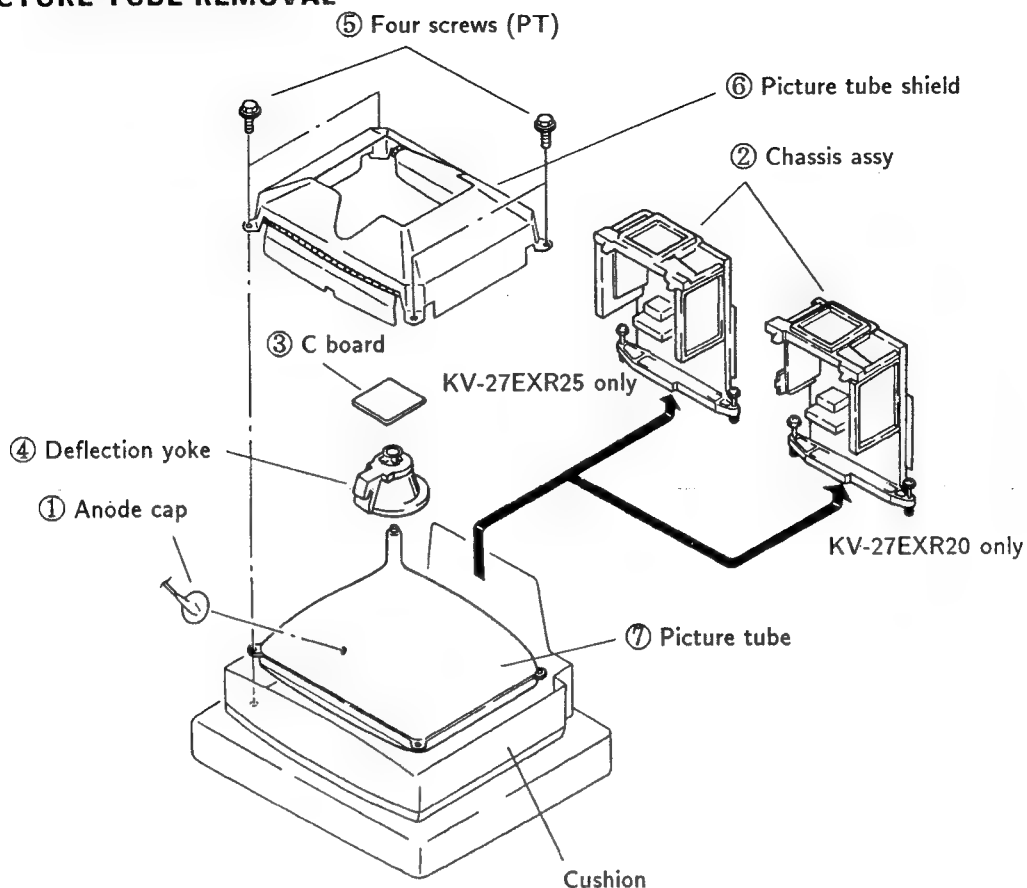
2-3. U1 BOARD, U2 BOARD AND P BOARD REMOVAL (KV-27EXR25)



2-4. SERVICE POSITION



2-5. PICTURE TUBE REMOVAL



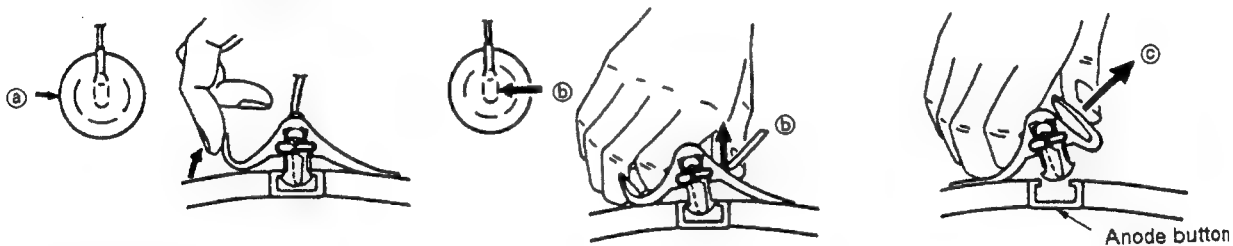
"CAUTION"

TO AVOID AN ELECTRIC SHOCK FROM CHARGED HIGH VOLTAGE OF PICTURE TUBE.

• REMOVAL OF ANODE-CAP

Short circuit the anode of the picture tube and the anode cap to the metal chassis, picture tube shield or carbon painted on the picture tube, after removing the anode.

• REMOVING PROCEDURES



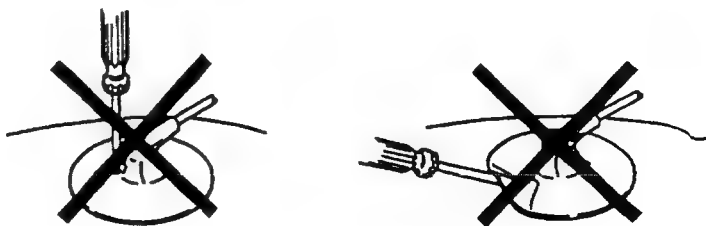
① Turn up one side of the rubber cap in the direction indicated by the arrow ②.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ③.

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ④.

• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.



SECTION 3

SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

The control and switch below should be set as follows unless otherwise noted:

PICTURE control To 80% (Full)
BRIGHTNESS control RESET position

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note: Test Equipment Required.

1. Pattern Generator
2. Degausser
3. Digital multimeter

Preparation:

- Set the side of the unit with the PICTURE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.

3-1. BEAM LANDING

1. Input a raster signal with the pattern generator.
2. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Fig.2.
3. Turn the raster signal of the pattern generator to green.
4. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and red and blue are at the sides evenly. (Fig.3)
5. Move the deflection yoke forward, and adjust so that entire screen becomes green. (Fig.1)
6. Switch over the raster signal to red and blue and confirm the condition.
7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
8. When landing at the corners is not right, adjust by using the disk magnets. (Fig.4)

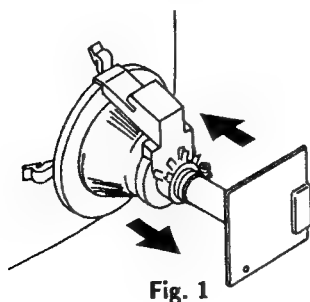
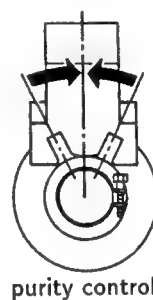


Fig. 1



purity control

Fig. 2

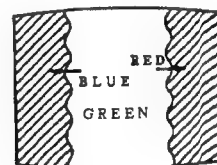


Fig. 3

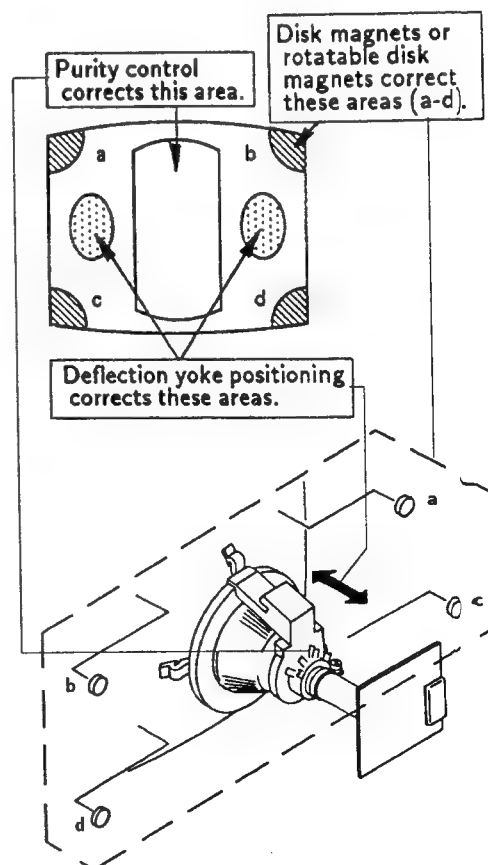


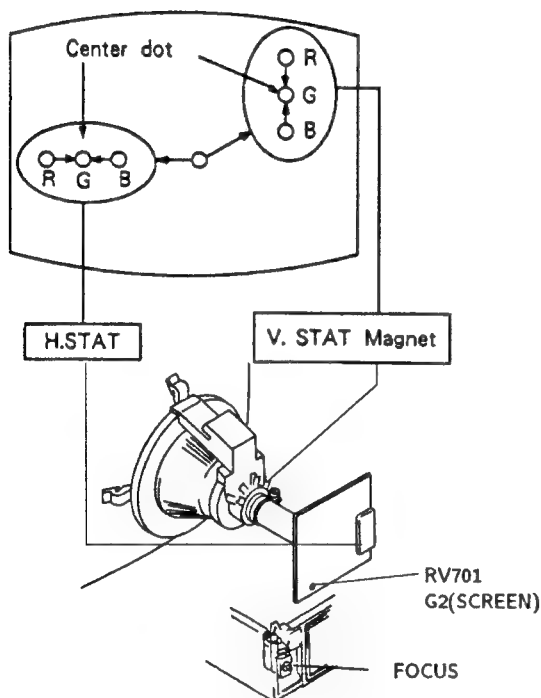
Fig. 4

3-2. CONVERGENCE

Preparation

- Before starting, perform FOCUS, H.SIZE, V.LIN and V.SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in dot pattern.

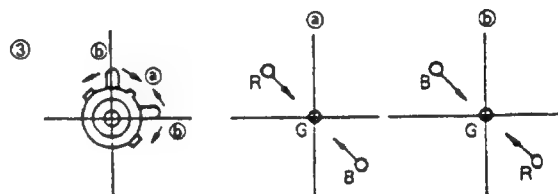
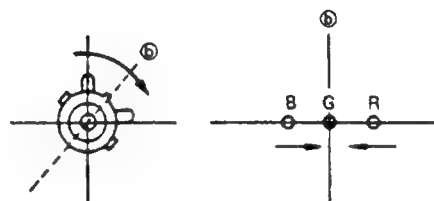
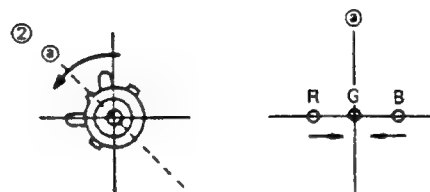
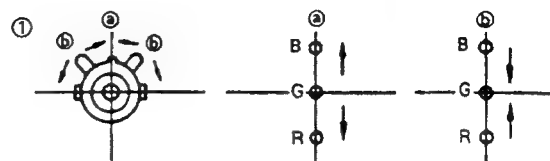
(1) Horizontal and Vertical Static Convergence



1. Adjust H.STAT VR to converge red, green and blue dots the in center of the screen. (Horizontal movement)
 2. Adjust V.STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)
 3. If the red, green and blue dots do not converge in the center of the screen with H.STAT VR, perform horizontal convergence adjustment using H.STAT VR and V.STAT magnet as shown below. (In this case, H.STAT VR and V.STAT magnet effect each other.)
- Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.



4. When the V.STAT magnet is moved in the direction of arrow ① and ②, red, green and blue dots move as shown below.

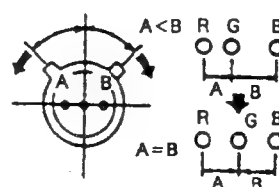


If the blue dot do not converge with red and green dots, perform following steps.

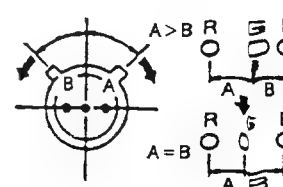
- HMC and VMC correction for BMC (Hexapole) Magnet

1. HMC (Horizontal Mis-convergence) correction and motion of the Electron Beam with the BMC Magnet.

HMC correction (A)

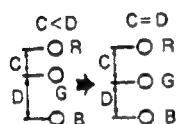
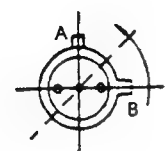


HMC correction (B)

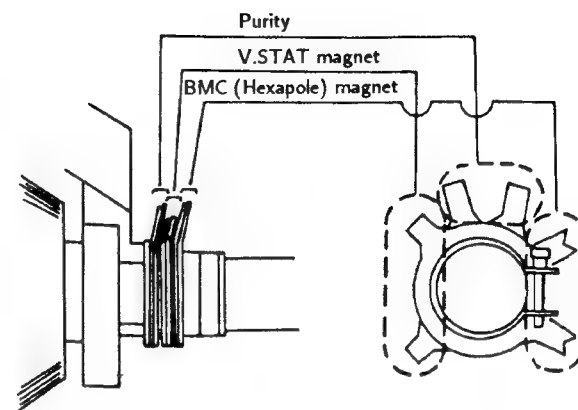
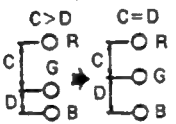
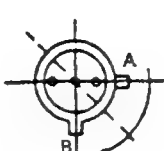


2. VMC (Vertical Mis-convergence) correction and motion of the Electron Beam with the BMC Magnet.

VMC correction (A)



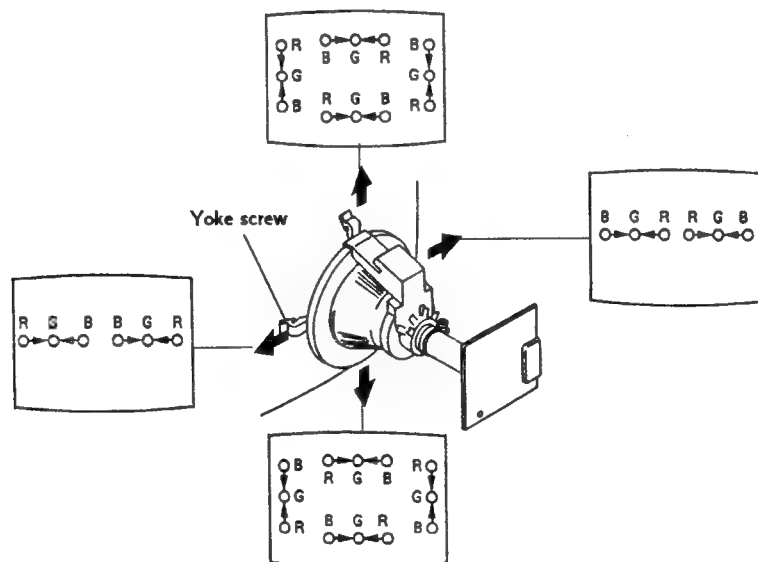
VMC correction (B)



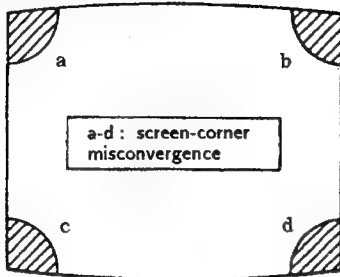
(2) Dynamic Convergence Adjustment

Perparation :

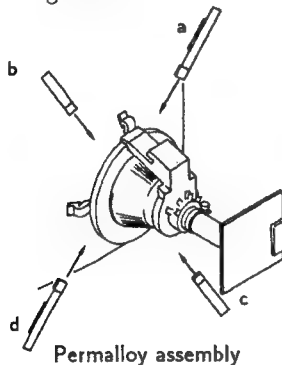
- Before starting perform Horizontal and Vertical Static convergence adjustment.
1. Slightly loosen deflection yoke screw.
 2. Remove deflection yoke spacers.
 3. Move the deflection yoke for best convergence as shown below.
 4. Tighten the deflection yoke screw.
 5. Install the deflection yoke spacers.



(4) Screen-corner Convergence



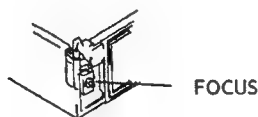
Affix a Permalloy ass'y corresponding to the misconverged areas.



3-3. FOCUS

1. Tune in an off-air signal.
2. PICTURE → control to 80%.
3. Adjust the focus VR on A board so that the focus at the center of the screen is optimum.

(A magenta ring will appear if the focus is adjusted only in the center of the screen.
Adjust evenly throughout the entire screen.)



3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G2 (SCREEN) ADJUSTMENT(RV701)

- 1) Set the PICTURE and BRIGHTNESS to normal.
- 2) Confirm G1 voltage is within $30.0 \pm 5V$.
- 3) Apply DC voltage of 180V to the cathodes of R, G and B from DC stabilized power source.
- 4) While watching the picture, adjust the G2 control (RV701) to the just the retrace line disappears.

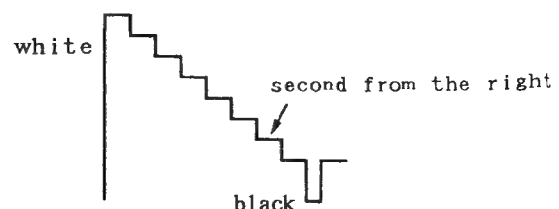
(Using the Remote Commander)

2. WHITE BALANCE ADJUSTMENTS

- 1) Set to service mode.
- 2) Press VIDEO → RESET to normal and if necessary "TRINITONE" set to "LOW" by + or -.
- 3) Input an entire white signal.
- 4) Set the PICTURE to minimum.
- 5) Select S BRT with 1 and 4, and then set the level to minimum with 3 and 6.
- 6) Select G CUT and B CUT with 1 and 4. And adjust the level with 3 and 6 for the best white balance.
- 7) Set the PICTURE to maximum.
- 8) Select G AMP and B AMP with 1 and 4, and adjust the level with 3 and 6 for the best white balance.
- 9) Write into the memory by pressing MUTING → then ENTER.

3. SUB BRIGHT ADJUSTMENT

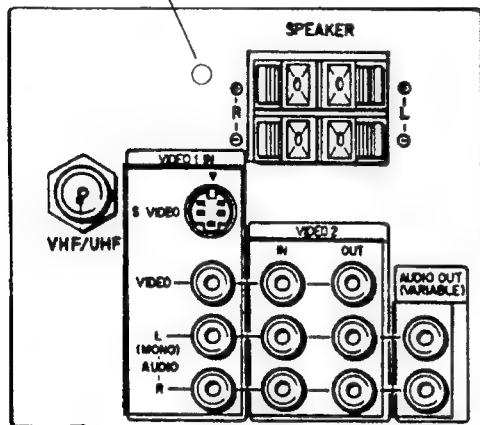
- 1) Set to service mode.
- 2) Input a staircase signal of black and white from the pattern generator.
- 3) BRIGHTNESS ... RESET
PICTURE minimum
- 4) Select S BRT with 1 and 4, and adjust SUB BRIGHT level with 3 and 6 so that the stripe second from the right is dimly lit.



a. METHOD OF SETTING THE SERVICE MODE

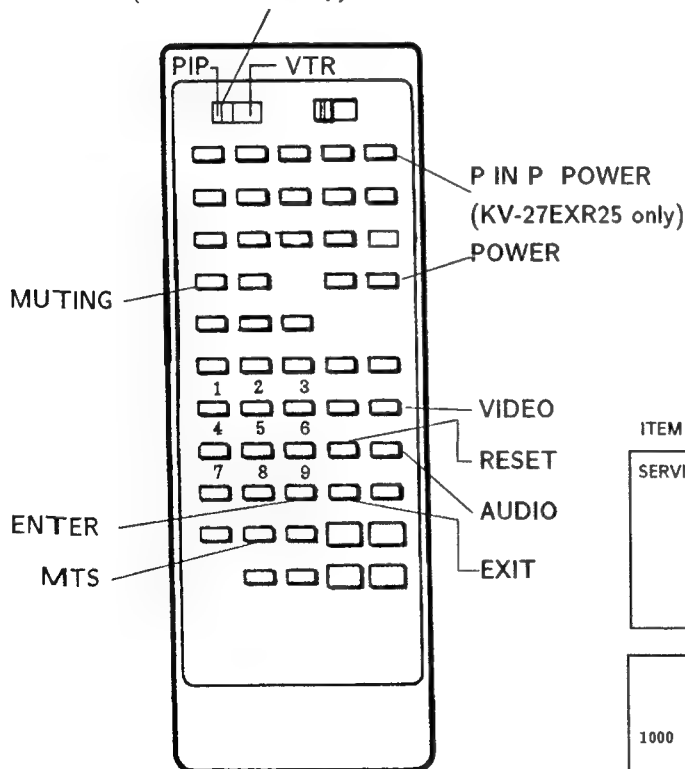
Press **POWER** button on the Remote Commander while pressing switch on the rear of the set.

Service modeswitch



b. ADJUST BUTTONS AND INDICATOR

(KV-27EXR25 only)



c. AN ITEM OF ADJUSTMENT

ITEM	NAME REGISTER	
GAMP	VP	GREEN AMP.
BAMP	VP	BLUE AMP.
GCUT	VP	GREEN CUT OFF.
BCUT	VP	BLUE CUT OFF
SBRT	VP	BRIGHT

d. METHOD OF CANCELLATION FROM SERVICE MODE

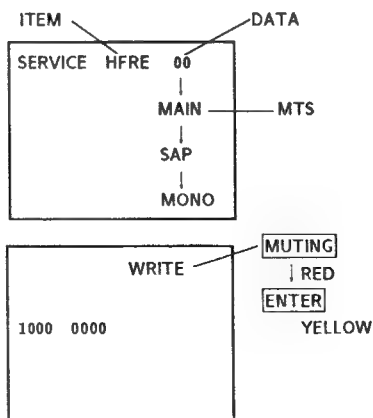
Set the standby condition (Press **POWER** button on the commander) in the next place, press **POWER** button again, hereupon it becomes TV mode.

e. METHOD OF WRITE FOR MEMORY

- 1) Set to Service Mode.
- 2) Press **1** (UP) and **4** (DOWN), select an item of adjustments.
- 3) Press **MUTING** button indicate WRITE (RED) on screen.
- 4) Press **ENTER** button to write for memory. (At this time WRITE (YELLOW) is indicated on screen.)

f. MEMORY WRITE CONFIRMATION METHOD

- 1) After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
- 2) Turn the power switch ON and set to Service Mode.
- 3) Call the adjusted items again, confirm they were adjusted.



SECTION 4 SAFETY RELATED ADJUSTMENTS

Note: Test Equipment Required.

1. Ammeter
2. DC Power Supply
3. Digital multimeter
4. Audio OSC
5. Variable auto-transformer

A BOARD AND G BOARD

☒ R559 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ☒ on the schematic diagram).

PM501, Q608, Q607, R629, R628, R627, R559

[1]

1. Preparation before confirmation

- 1) Remove R675 on the G board and connect a variable resistor (RV1: about $10k\Omega$) between pin ① of IC653 and B+ line.
- 2) Supply $120 \pm 2.0V$ AC to with variable auto-transformer.

2. Hold-down operation confirmation

- 1) Turn the POWER switch ON, and input an entirely white signals and adjust ABL current to $1650 \pm 80 \mu A$ with PICTURE and BRIGHT etc controls.
- 2) Increase B+ line voltage gradually by adjusting the resistor of RV1. Confirm that the minimum voltage is less than 143.5V DC whereby the raster disappears during operation of hold-down circuit.

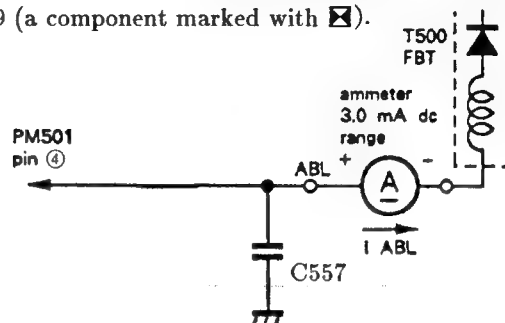
NOTE: When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.

- 3) Turn the POWER switch ON, and input a dot signals and adjust ABL current to $150 \pm 50 \mu A$ with PICTURE and BRIGHT etc controls.
- 4) Increase B+ line voltage gradually by adjusting the resistor of RV1. Confirm that the minimum voltage is less than 146.5V DC whereby the raster disappears during operation of hold-down circuit.

NOTE: When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.

3. Hold-down readjustment

When step 2 is not satisfied, readjustment should be performed by altering the resistance value of R559 (a component marked with ☒).



A BOARD AND G BOARD**☒ R570 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS**

The following adjustments should always be performed when replacing the following components (marked with ☒ on the schematic diagram).

A BOARD: PM501, Q608, Q607, D531, C545, R570, R591, R628, R627, T500

G BOARD: IC653, R675,

[2]

1. Preparation before confirmation

- 1) Turn the POWER switch ON, and input an entirely white signals and set the PICTURE and BRIGHT controls to maximum.
- 2) Confirm that voltage of the check terminal of TP-85 is more than 108V DC when the set is operating normally with 120.0 ± 2.0 V AC supply.

2. Hold-down operation confirmation

- 1) Turn the POWER switch ON, and input an entirely white signals and adjust ABL current to $1650 \pm 80 \mu\text{A}$ with PICTURE and BRIGHT etc controls.
- 2) Apply DC voltage of over 130V DC gradually to the check terminal of TP85 via 1SS119 from the DC stabilized power source.
Confirm that the minimum voltage is less than 137.5V DC whereby the raster disappears during operation of hold-down circuit.
- 3) Turn the POWER switch ON, and receive dot signals and adjust ABL current to $150 \pm 50 \mu\text{A}$ with PICTURE and BRIGHT etc controls.
- 4) Apply DC voltage of over 130V gradually to the check terminal of TP85 via 1SS119 from the DC stabilized power source.

Confirm that the minimum voltage is less than 138.5V DC whereby the raster disappears during operation of hold-down circuit.

NOTE: When the Hold-down circuit starts operating, switch OFF the POWER of the set immediately.

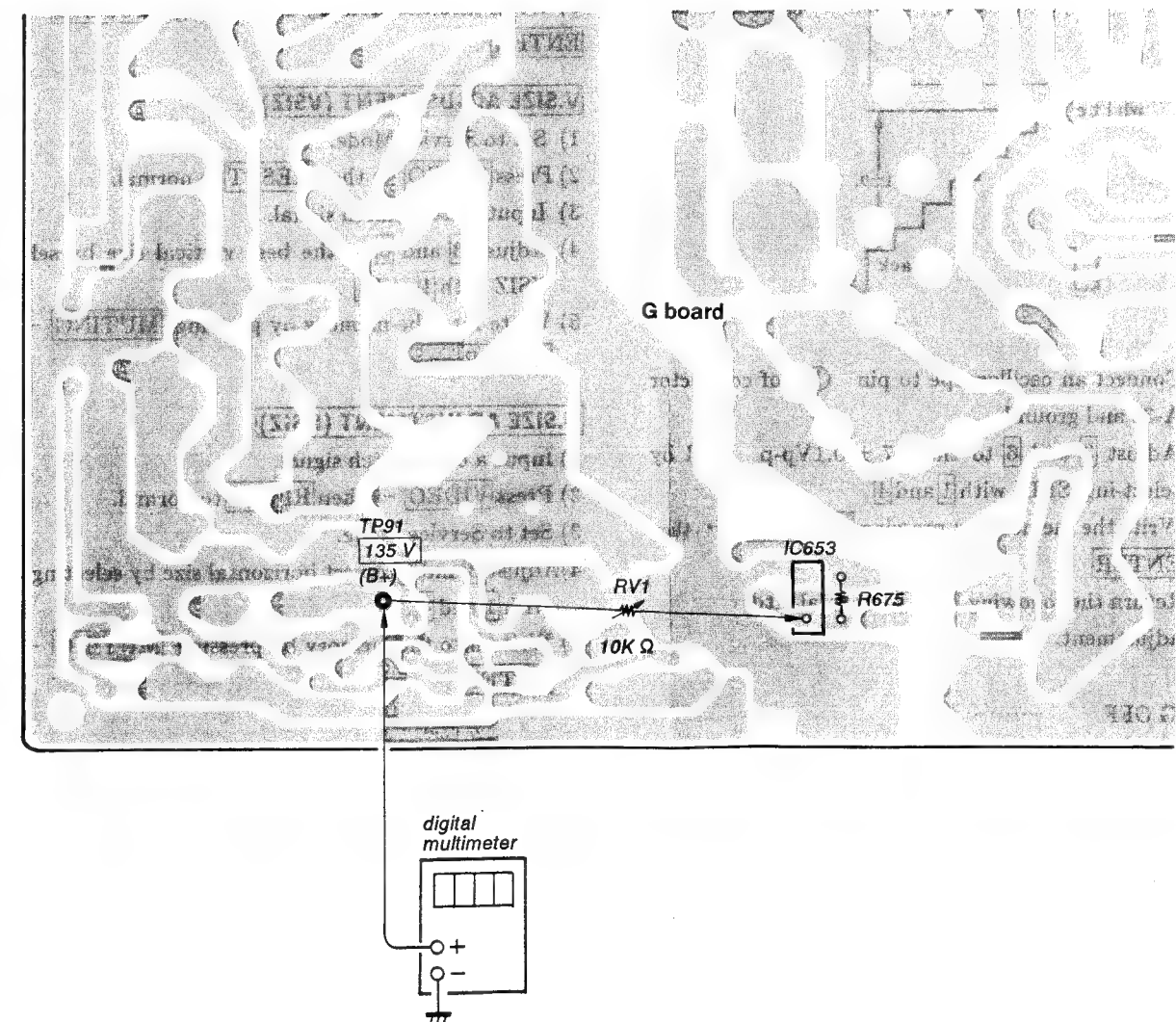
3. Hold-down readjustment

When step 2 is not satisfied, readjustment should be performed by altering the resistance value of R570 carbon 1/4w (a component marked with ☒).

G BOARD**B+ VOLTAGE CONFIRMATION**

The following adjustments should always be performed when replacing IC653 and R675.

- 1) Supply 130 ± 1.0 V AC to with variable autotransformer.
- 2) Input an entirely monoscope signal.
- 3) Set the PICTURE control and the BRIGHT controls in to initial reset.
- 4) Confirm the voltage of TP91 is less than 137.0V DC.
- 5) If step 4) is not satisfied, replace IC653 and R675 repeat above steps.



SECTION 5
CIRCUIT ADJUSTMENTS5-1. ELECTRICAL ADJUSTMENT BY
REMOTE COMMANDER

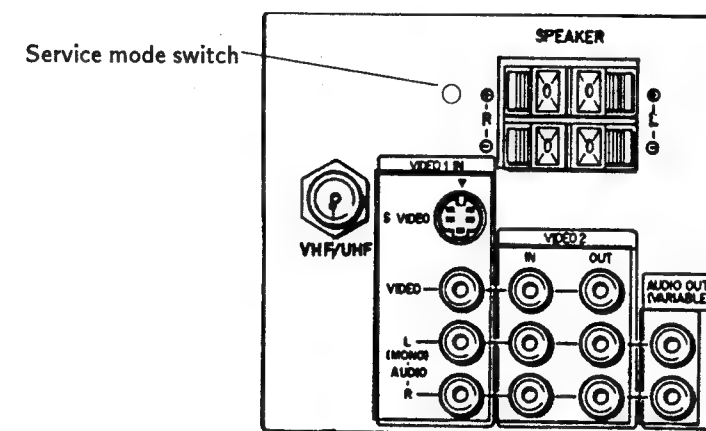
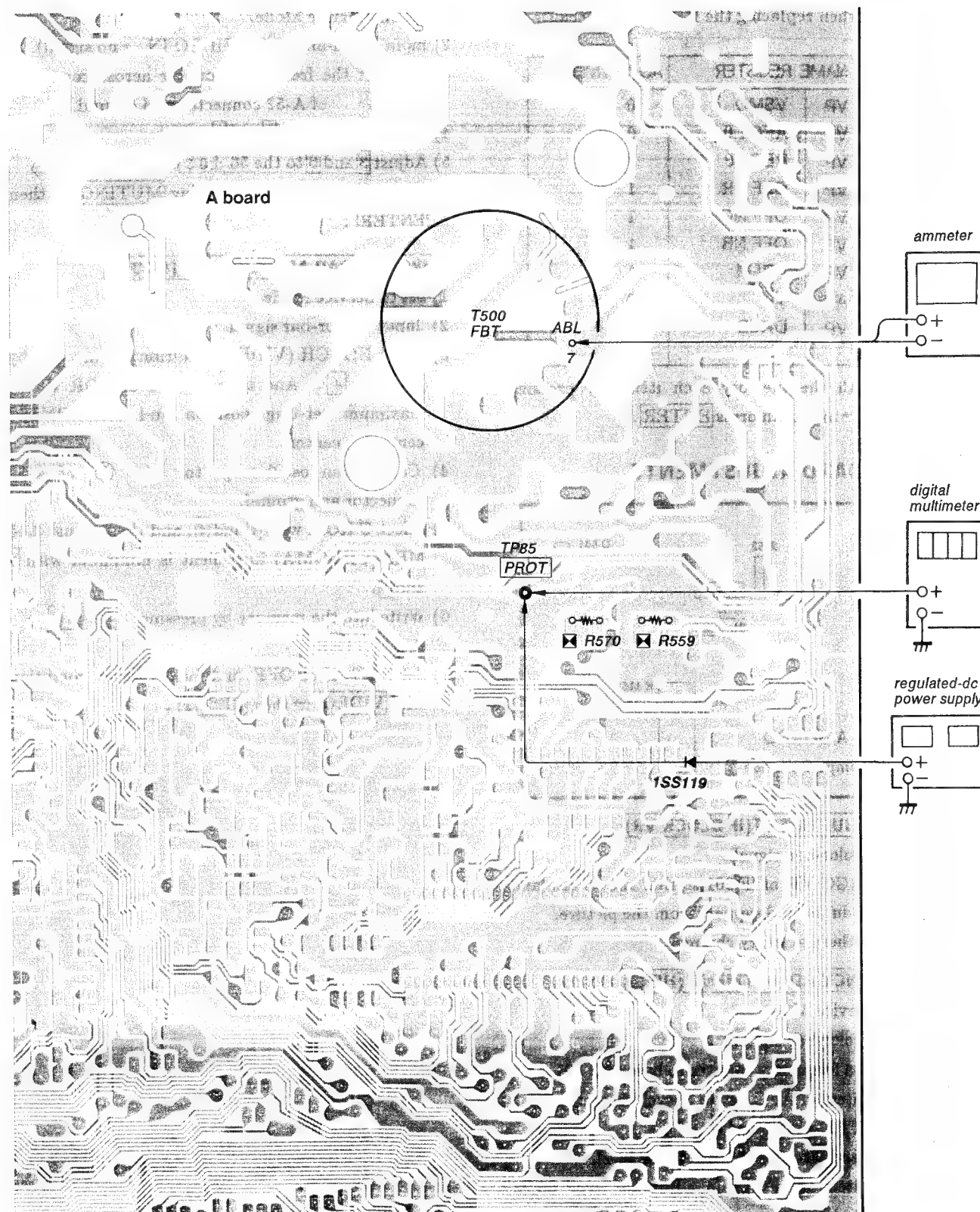
Use of Remote Commander (RM-Y 103, RM-Y 104) can be performed circuit adjustments about this model.

1. METHOD OF SETTING THE SERVICE MODE

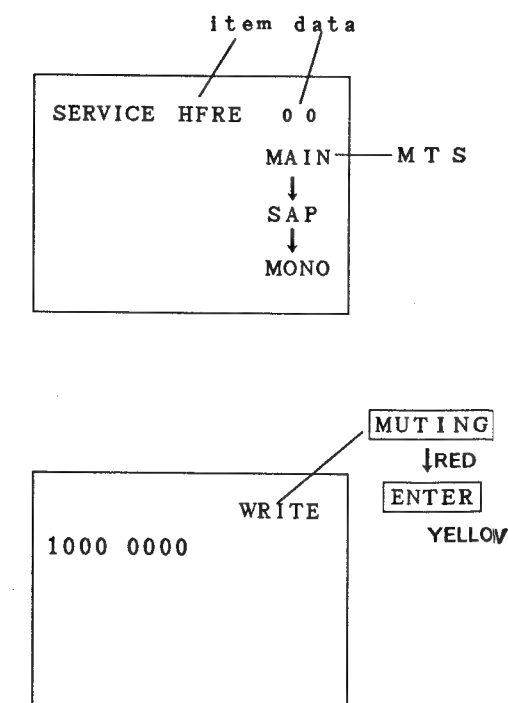
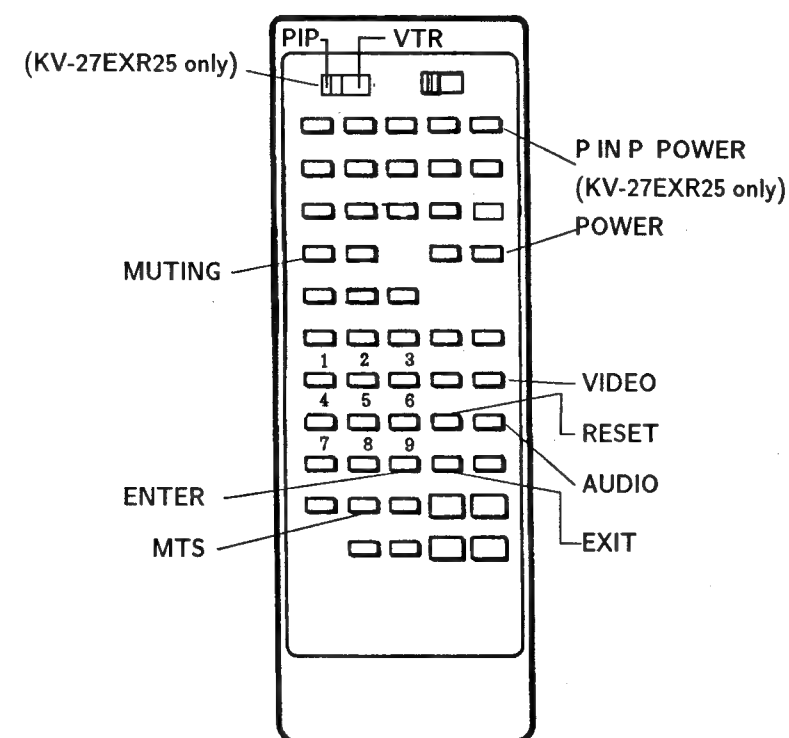
- 1) Press **POWER** button on the Remote Commander while pressing switch on the rear of the set.

NOTE : Test Equipment Required.

1. Pattern Generator
2. Frequency counter
3. Digital multimeter
4. Audio OSC



2. ADJUST BUTTONS AND INDICATOR



3. AN ITEM OF ADJUSTMENT

ITEM	REFERENCE DATA	NAME	REGIST
HFRE	44	VP	H-FREQUENCY 1
VFRE	09	VP	V-FREQUENCY 1
VPOS	10	VP	V-SHIFT
VSIZ	1 D	VP	V-SIZE
VLIN	07	VP	V-LINEARITY
VSCO	08	VP	S-CORRECTION
HPOS	07	VP	H-PHASE
HSIZ	11	VP	H-SIZE
PAMP	0 F	VP	PIN AMP.
CPIN	04	VP	CORNER PIN
PPHA	07	VP	PIN PHASE
VCOM	02	VP	V-COMP
GAMP	17	VP	GREEN AMP.
BAMP	18	VP	BLUE AMP.
GCUT	0 D	VP	GREEN CUT OFF
BCUT	09	VP	BLUE CUT OFF
CROM	1 B	VP	CHROMA TRAP
SPIX	33	VP	PICTURE
SHUE	23	VP	HUE
SCOL	1 C	VP	COLOR
SBRT	3 F	VP	BRIGHT
RGBP	1 E	VP	RGB PICTURE
MPX	08	AP	ATT
FILO	1 B	AP	I1
DEEM	07	AP	I2
STEV	21	AP	OSC 1
SAPV	1 F	AP	OSC 2
PILO	08	AP	PILOT
SEP	1 B	AP	WIDE BAND
VD	0 A	AP	SPECTRAL
LVOL	00	AP	VOLUME-L
RVOL	00	AP	VOLUME-R
SHAR	07	VP	SHARPNESS
DISP	37	VP	PWM OUTPUT

4. METHOD OF CANCELLATION FROM SERVICE MODE

Set the standby condition (Press **POWER** button on the commander) in the next place, press **POWER** button again, hereupon it becomes TV mode.

5. METHOD OF WRITE FOR MEMORY

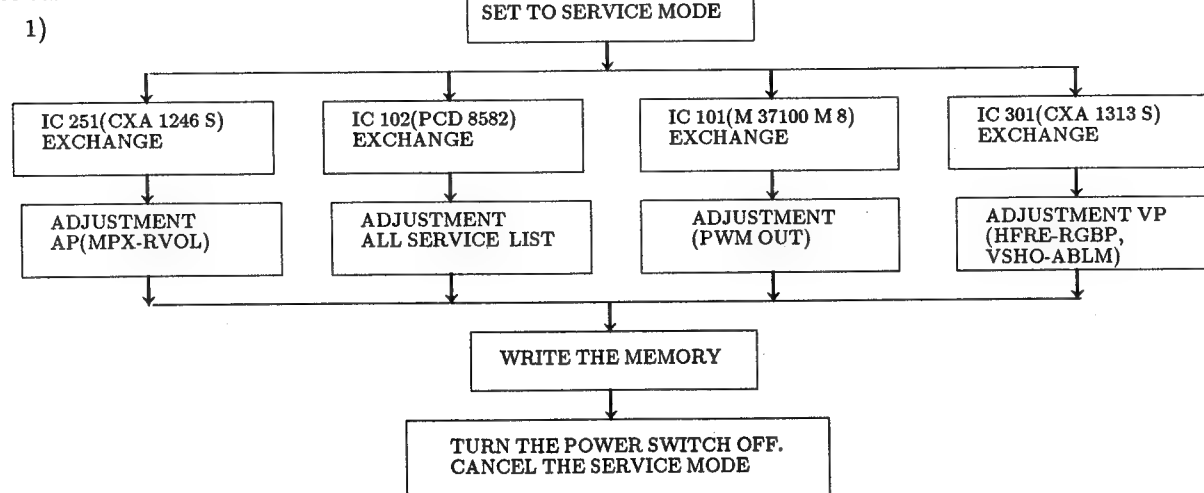
- 1) Set to Service Mode.
- 2) Press **1** (UP) and **4** (DOWN), select an item of adjustments.
- 3) Press **MUTING** button indicate WRITE (RED) on screen.
- 4) Press **ENTER** button to write for memory. (At this time WRITE (YELLOW) is indicated on screen.)

6. MEMORY WRITE CONFIRMATION METHOD

WRITE
1000 0000

- 1) After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
- 2) Turn the power switch ON and set to Service Mode.
- 3) Call the adjusted items again, confirm they were adjusted.

7. ADJUSTMENT WHEN REPLACING IC



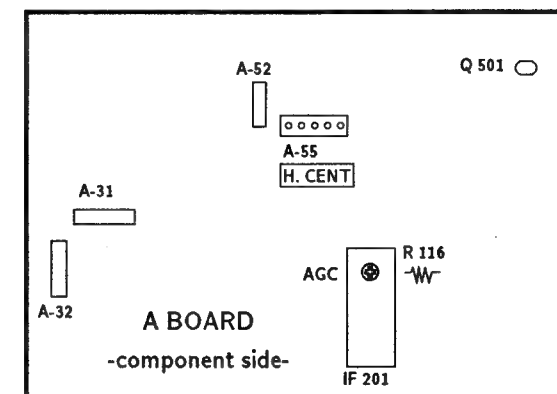
NOTE: If service mode is canceled before writing into memory, the adjustment data is not recorded. Please write into memory, after adjustment.

- 2) The following initial setting should always be performed when replacing the IC 102 (PCD 8582).

ITEM	NAME	REGISTER	ADJUSTMENT
VSOM	VP	VSMO	0
AFC	VP	AFC 1.0	0
REF	VP	REF 1.0	2
ROFF	VP	OFF NR	1
GOff	VP	OFF NG	1
BOFF	VP	OFF NB	1
ABLM	VP	ABLM	1
TEST	AP	T	0
DRGB	VP	DRGB	1

*Please with the memory each items by pressing **MUTING** → and then press **ENTER**.

5-2. A BOARD ADJUSTMENTS



RF AGC ADJUSTMENT (IF BLOCK VR)

- 1) Input a color-bar signal.
- 2) Adjust AGC VR of IF 201 so that snow noise and cross-modulation disappear from the picture.
- 3) Confirm them at every channel.

H.FREQUENCY ADJUSTMENT (HFRE)

- 1) Set to Service Mode.
- 2) Input a color-bar signal.
- 3) Connect a frequency counter to base of Q 501.
- 4) Call the item of AFC, set to 3 level (free run).
- 5) Select HFRE with **1** and **4**.
- 6) Adjust **3** and **6** to the 15735 ± 60 Hz level.
- 7) Call the item of AFC again, adjust the level "00".
- 8) Write into the memory by pressing **MUTING** → then **ENTER**.

V.FREQUENCY ADJUSTMENT (VFRE)

- 1) Set the Service Mode.
- 2) Input an off-air signal (VIDEO IN → no signal).
- 3) Connect the frequency counter across connector V.DY+ of A-52 connector and ground.
- 4) Select VFRE with **1** and **4**.
- 5) Adjust **3** and **6** to the 56 ± 0.5 Hz.
- 6) Write the memory by pressing **MUTING** → then **ENTER**.

CHROMA TRAP ADJUSTMENT (CROM)

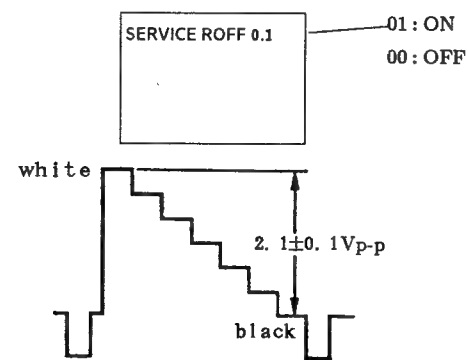
- 1) Set to Service Mode.
- 2) Input a color-bar signal.
- 3) Select NOTCH (VIDEO condition), turn ON by pressing **+**. And then set the COLOR VR to maximum set-ting position and SHARPNESS control to center.
- 4) Connect an oscilloscope to pin ① of A-32 connector and ground.
- 5) Select C ROM with **1** and **4**, and then adjust 3.58 MHz (CHROMA) ingredient is minimum with **3** and **6**.
- 6) Write into the memory by pressing **MUTING** → then **ENTER**.
- 7) Set NOTCH to OFF, and make normal condition with **VIDEO** → then **RESET**.

SUB CONTRAST ADJUSTMENT (SPIX)

- 1) Set to Service Mode.
- 2) Input a color-bar signal. (75 IRE)
- 3) Set the conditions as follows.

PICTURE MAX
 COLOR MIN
 R OFF ON
 G OFF OFF
 B OFF OFF

Press **VIDEO** → **[-]** (L) (It becomes minimum).
 Select **[3]** (ON) and **[6]** (OFF) with **[1]** and **[4]**.

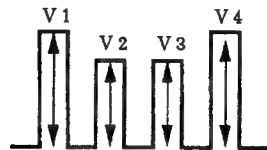


- 4) Connect an oscilloscope to pin ① of connector A-32 and ground.
- 5) Adjust **[3]** and **[6]** to the $1.7 \pm 0.1V_{p-p}$ level by select-ing SPIX with **[1]** and **[4]**.
- 6) Write the memory by pressing **MUTING** → then **ENTER**.
- 7) Return the following back to normal after adjustment.

G OFF ON
 B OFF ON
 COLOR CENTER
 PICTURE 80%

SUB HUE, SUB COLOR ADJUSTMENT (SHUE, SCOL)

- 1) Input a color-bar signal.
- 2) Press **VIDEO** → then **RESET** to normal.
- 3) Set to Service Mode.
- 4) Connect an oscilloscope to pin ③ of connector A-32 and ground.
- 5) Adjust **[3]** and **[4]** to the $V1=V4$ and $V2=V3$ by select to SHUE and SCOL with **[1]** and **[4]**.



- 6) Write into the memory by pressing **MUTING** → then **ENTER**.

V.SIZE ADJUSTMENT (VSIZ)

- 1) Set to Service Mode.
- 2) Press **VIDEO** → then **RESET** to normal.
- 3) Input a cross-hatch signal.
- 4) Adjust **[3]** and **[6]** to the best vertical size by selecting VSIZ with **[1]** and **[4]**.
- 5) Write into the memory by pressing **MUTING** → then **ENTER**.

H.SIZE ADJUSTMENT (HSIZ)

- 1) Input a cross-hatch signal.
- 2) Press **VIDEO** → then **RESET** to normal.
- 3) Set to Service Mode.
- 4) Adjust **[3]** and **[6]** to best horizontal size by selecting HSIZ with **[1]** and **[4]**.
- 5) Write into the memory by pressing **MUTING** → then **ENTER**.

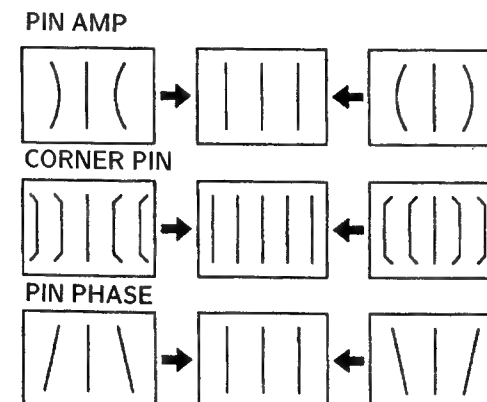
H.CENTER ADJUSTMENT (H POS)

Note: Perform this adjustment after H.FREQUENCY ADJUSTMENT (HFRE).

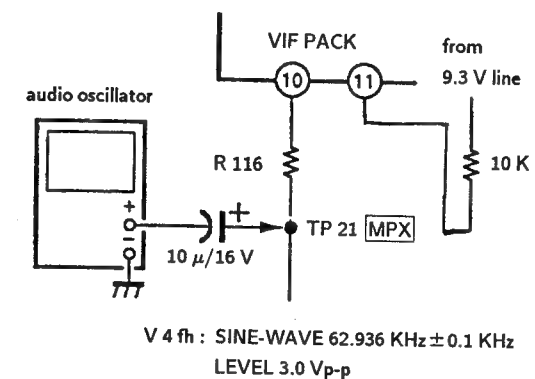
- 1) Input a color bar signal.
- 2) Set the Service mode.
- 3) Select HSIZ with **[1]** and **[4]**.
- 4) Press **[6]** so that the Horizontal size set to min.
- 5) Adjust A-55 conector position so that both-size blanking width of the Raster should be same on the Scrnnne.
- 6) Unplug Set then plug in Set.
- 7) Set to Service mode.
- 8) Select HPOS with **[1]** and **[4]**.
- 9) Adjust **[3]** and **[6]** so that the color bars center should be set to the CRT Screen center position.
- 10) White into the memory by the pressing **MUTING** → then **ENTER**.

**PIN AMP (PAMP), CORNER PIN (CPIN) AND PIN PHASE (PPHA) ADJUSTMENT**

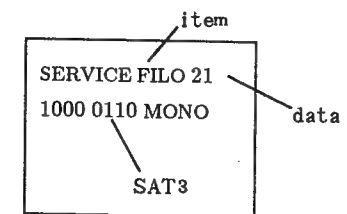
- 1) Input a cross-hatch signal.
- 2) Press **VIDEO** → then **RESET** to normal.
- 3) Set to Service Mode.
- 4) Select PAMP, CPIN and PPHA with **[1]** and **[4]**.
- 5) Adjust **[3]** and **[6]** to the best picture.
- 6) Write the memory by **MUTING** → **ENTER**.

**FILTER ADJUSTMENT (MPX, FILO)**

- 1) Set to Service Mode.
- 2) Select to **TEST** with **[1]** and **[4]**, set the data to "1".
Then select MPX and change data to "08".
- 3) Connect an audio oscillator to R116 using a capacitor (10μF/16V), set frequency to 62.936 kHz ± 0.1 kHz.
And then, through the 10kΩ resistor, feed 9.3V into the pin ⑪ of VIF pack.

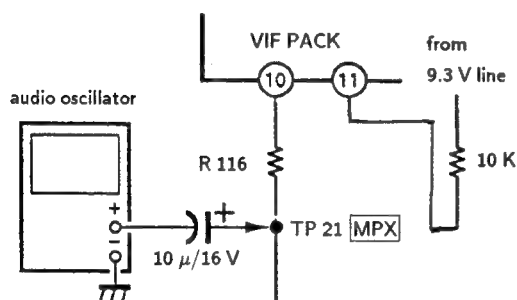


- 4) Make the data "00" by selecting FILO with **[1]** and **[4]** And then, send up the data gradually by pressing **[6]**. Set the data to D1 before SAT3 changing to 1 from 0.
- 5) Send up the data gradually. Set data D2 when SAT3 changes 0 from 1.
- 6) Adjust the data of FILO to $\frac{D1 + D2}{2}$.
- 7) Write into the memory by pressing **MUTING** → then **ENTER**.



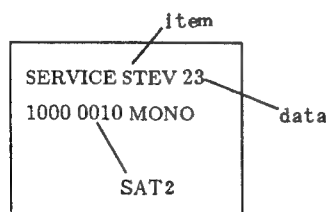
ST VCO ADJUSTMENT (MPX, STEV)

- 1) Set to Service Mode.
- 2) Select TEST with **[1]** and **[4]**, set the data to "1".
And then press **[MTS]** to MONO.
- 3) Select MPX, set the data "8".
- 4) Connect an audio oscillator to R 116 using electrolytic capacitor (10 μ F/16V) and apply the frequency V_{ST}. Then, apply DC voltage to pin ⑪ of VIF pack using 10k Ω connect to 9.3V line.



V 4 fh : SINE-WAVE 62.936 KHz \pm 0.1 KHz
LEVEL 3.0 Vp-p

- 5) Select STEV with **[1]** and **[4]**, set the data to "00" with **[6]**. And then, send up the data gradually. Set the data to D1 before SAT2 changes from 0 to 1.
- 6) Send up data gradually, set the data to D2 when SAT2 changes 1 from 0.
- 7) Adjust the data of STEV to
- 8) Write into the memory by pressing **[MUTING]** \rightarrow then **[ENTER]**.

**MPX IN LEVEL ADJUSTMENT (MPX)**

- 1) Set to Service Mode.
- 2) Select TEST with **[1]** and **[4]**, set the data to "0" with **[6]**. And then press **[MTS]** to MONO.
- 3) Select MPX with **[1]** and **[4]**, set the data to "08" with **[3]** and **[6]**.
- 4) Write into the memory by pressing **[MUTING]** \rightarrow then **[ENTER]**.

PILOT CANCEL ADJUSTMENT (PILO)

- 1) Set to the Service Mode.
- 2) Select TEST with **[1]** and **[4]**, set the data to "0" with **[6]**. And then press **[MTS]** to MAIN.
- 3) Select PILO with **[1]** and **[4]**, set the data to "08" with **[3]** and **[6]**.
- 4) Write into the memory by pressing **[MUTING]** \rightarrow then **[ENTER]**.

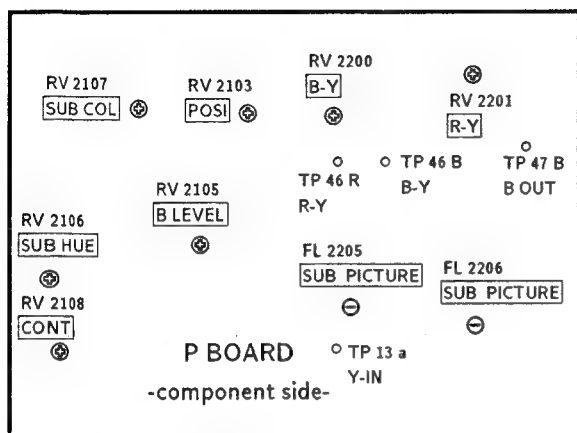
SAP VCO f₀ ADJUSTMENT (SAPV)

- 1) Set to Service Mode.
- 2) Input a stereo broadcast signal with SAP.
- 3) Select TEST with **[1]** and **[4]**, set the data to "0". And then, press **[MTS]** to MAIN.
- 4) Connect a digital multimeter to TP-1DBX). This voltage reading will equal V 1.
- 5) Press MTS to SAP and this voltage will equal V 2.
- 6) Select SAPV with **[1]** and **[4]**, adjust **[3]** and **[6]** so that V 2 = V 1 \pm 0.03 VDC.
- 7) Write the memory by **[MUTING]** \rightarrow **[ENTER]**.

SEPARATION ADJUSTMENT (SEP)

- 1) Set to Service Mode.
- 2) Press **[MTS]** to MAIN and receive a monorabroadcast signal.
In the next step, receive a stereo broadcast signal.
- 3) Select SEP and VD with **[1]** and **[4]**, adjust **[3]** and **[6]** so that a clear stereo sound is effected.

5-3. P BOARD ADJUSTMENTS (KV-27 EXR 25 only)

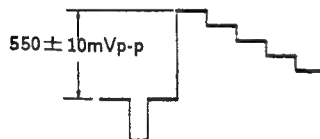


RF AGC ADJUSTMENT(IF BLOCK VR)

- 1) Input a color-bar signal.
- 2) Set to PICTURE IN PICTURE mode.
- 3) Adjust AGC VR of IF 1201 so that snow noise and cross-modulation disappear from the picture.
- 4) Confirm them at every channel.

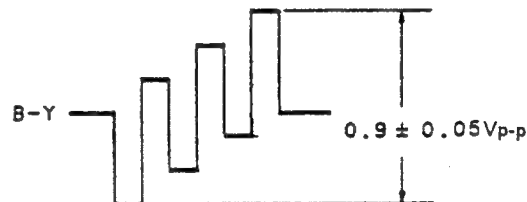
CONTRAST ADJUSTMENT(RV 2108)

- 1) Input a color-bar signal.
- 2) Set to PICTURE IN PICTURE mode.
- 3) Observe signal at TP-13 a an oscilloscope.
- 4) Adjust RV 2108 (SUB CONT) so that the signal level between white and pedestal becomes 550 ± 10 mVp-p as shown.



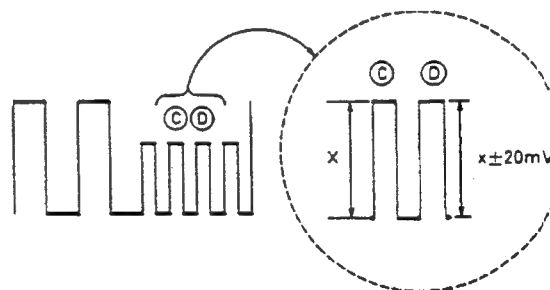
SUB COLOR ADJUSTMENT(RV 2107)

- 1) Input a color-bar signal.
- 2) Set to PICTURE IN PICTURE mode.
- 3) COLOR RESET
HUE RESET
- 4) Connect an oscilloscope to TP-47 B.
- 5) Adjust RV 2107 so that voltage is 0.9 ± 0.05 Vp-p.



SUB HUE ADJUSTMENT(RV 2106)

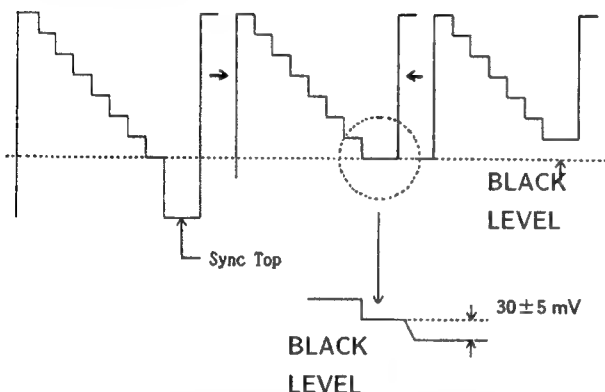
- 1) Input a color-bar signal.
- 2) Set to PICTURE IN PICTURE mode.(1/4 SIZE)
- 3) PICTURE 80%
BRIGHT RESET
COLOR RESET
HUE RESET
- 4) Connect an oscilloscope to TP-47 B.
- 5) Adjust RV2106 so that the ③ coincides with ① as shown in figure.



BRT LEVEL ADJUSTMENT(RV 2105)

- 1) Input a color-bar signal.
- 2) Observe PICTURE IN PICTURE mode.
- 3) Adjust RV 2105(B.LEVEL)so that the signal level between C.B.black level and Sync level becomes same level as shown.

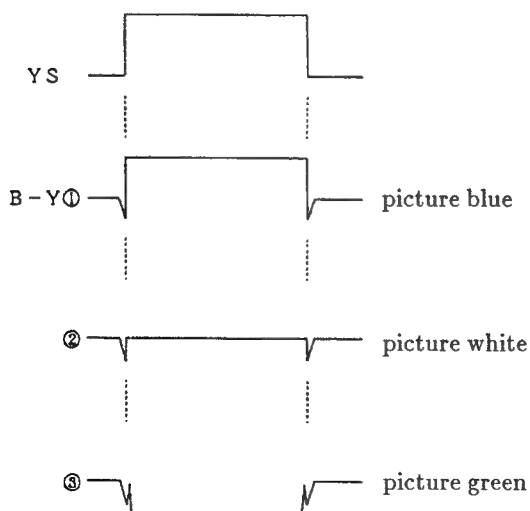
TP-13 a output



A/D OFF SET ADJUSTMENT(RV 2200,2201)

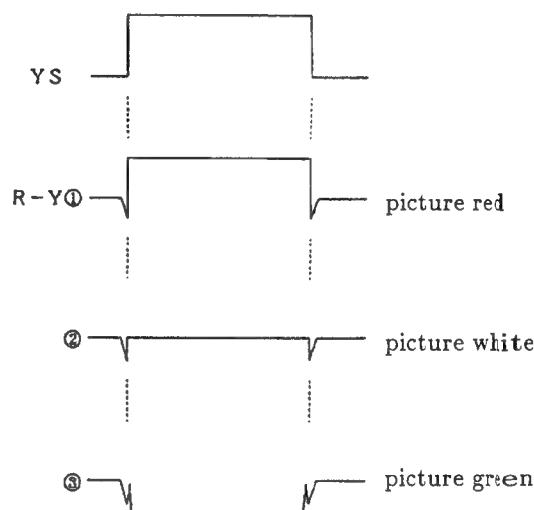
B-Y ADJUSTMENT

- 1) Input a color-bar signal.
- 2) Set to PICTURE IN PICTURE mode.
- 3) Connect an oscilloscope to TP-46 B.
- 4) Adjust RV 2200 so that the wavefront as shown in figure.



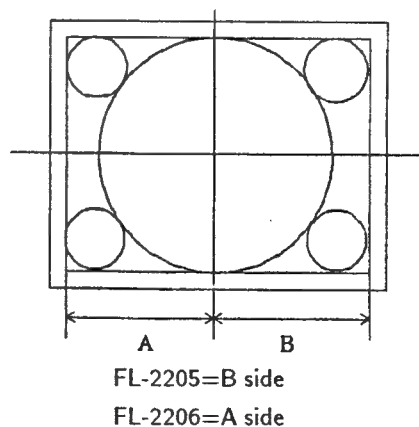
R-Y ADJUSTMENT

- 1) Input a color-bar signal.
- 2) Set to PICTURE IN PICTURE mode.
- 3) Connect an oscilloscope to TP-46 R.
- 4) Adjust RV 2201 so that the wavefront as shown in figure.



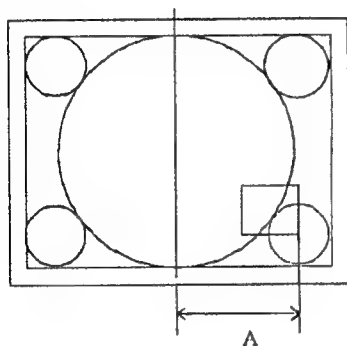
SUB PICTURE ADJUSTMENT(FL 2205,2206)

- 1) Input a monoscope signal.
- 2) Set to PICTURE IN PICTURE mode.
- 3) Adjust FL2205,FL2206 so that A and B are same size.



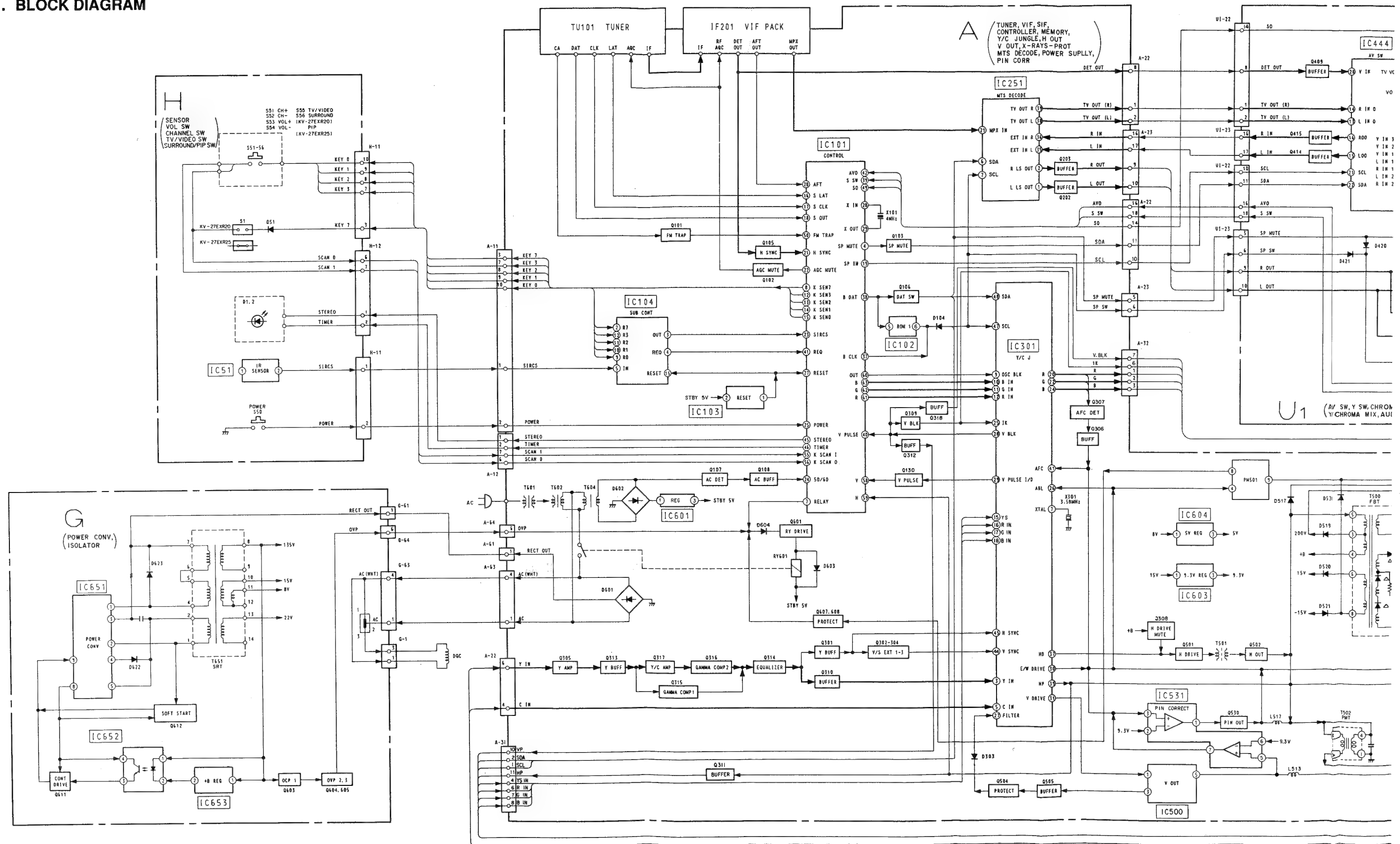
SUB PICTURE POSITION ADJUSTMENT(RV 2103)

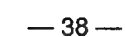
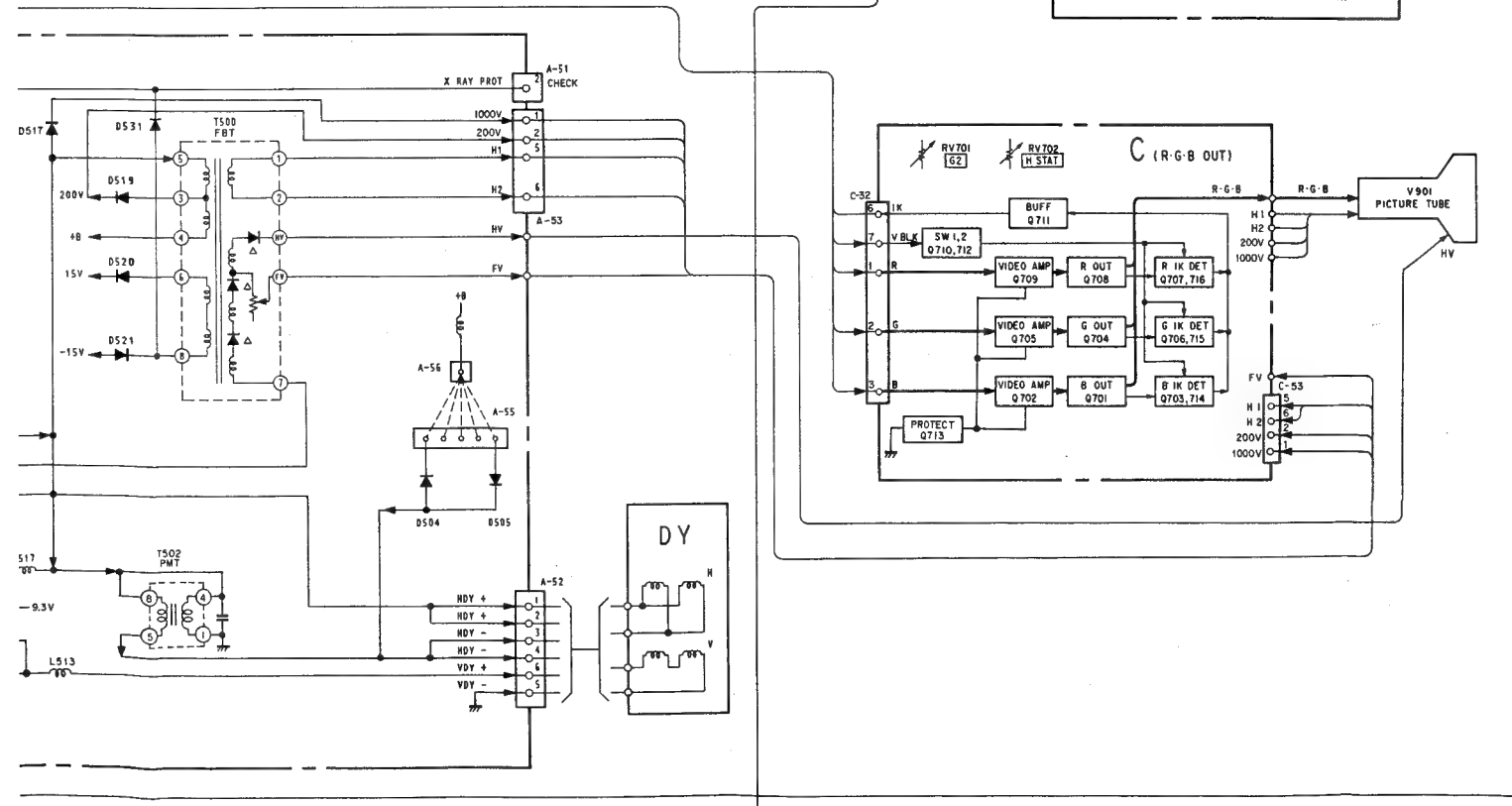
- 1) Input a cross-hatch signal.
- 2) Set to PICTURE IN PICTURE mode.
- 3) Adjust RV 2103 so that the SUB PICTURE is a suitable position.



SECTION 6
DIAGRAMS

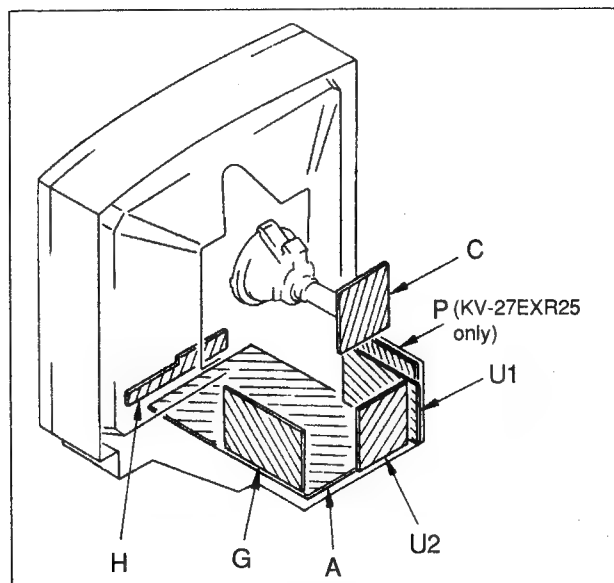
6-1. BLOCK DIAGRAM





A TUNER, VIF, SIF, CONTROLLER, MEMORY, Y/C JUNGLE,
H OUT, V OUT, X RAYS PRO, MTS DECODE,
POWER SUPPLY, PIN CORR

6-2. CIRCUIT BOARDS LOCATION



6-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS -Conductor Side-

Note:

- All capacitors are in μF unless otherwise noted. pF : μpF
50WV or less are not indicated except for electrolytic and tantalums.
- All electrolytics are in 50V unless otherwise specified.
- All resistors are in ohms.
 $\text{k}\Omega=1000\Omega$, $\text{M}\Omega=1000\text{k}\Omega$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm

Rating electrical power 1/4W

- Chips resistors are 1/10W.
- : nonflammable resistor.
- : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-ground.
- : earth-chassis.
- The components identified by in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by mark the necessary adjustments indicated. If results do not meet the specified value, change the component identified by and repeat the adjustment until the specified value is achieved. (Refer to R570 and R559 adjustment on page 22-25)
When replacing the part in below table, be sure to perform the related adjustment.

Part replaced ()	Adjustment ()
PM501, Q607, Q608, R559, R627, R628, R629	R559 Hold-down
IC653, PM501, Q607, Q608, D531, C545, R570, R591, R627, R628, R675, T500	R570 Hold-down

Reference information

RESISTOR	: RN METAL FILM
	: RC SOLID
	: FPRD NONFLAMMABLE CARBON
	: FUSE NONFLAMMABLE FUSIBLE
	: RS NONFLAMMABLE METAL OXIDE
	: RB NONFLAMMABLE CEMENT
	: RW NONFLAMMABLE WIREWOUND
	: * ADJUSTMENT RESISTOR
COIL	: LF-8L MICRO INDUCTOR
CAPACITOR	: TA TANTALUM
	: PS STYROL
	: PP POLYPROPYLENE
	: PT MYLAR
	: MPS METALIZED POLYESTER
	: MPP METALIZED POLYPROPYLENE
	: ALB BIPOLAR
	: ALT HIGH TEMPERATURE
	: ALR HIGH RIPPLE

- Readings are taken with a color-bar signal input.
- Readings are taken with a 10 $\text{M}\Omega$ digital multimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- : B+ bus.
- : B- bus.
- : signal path.

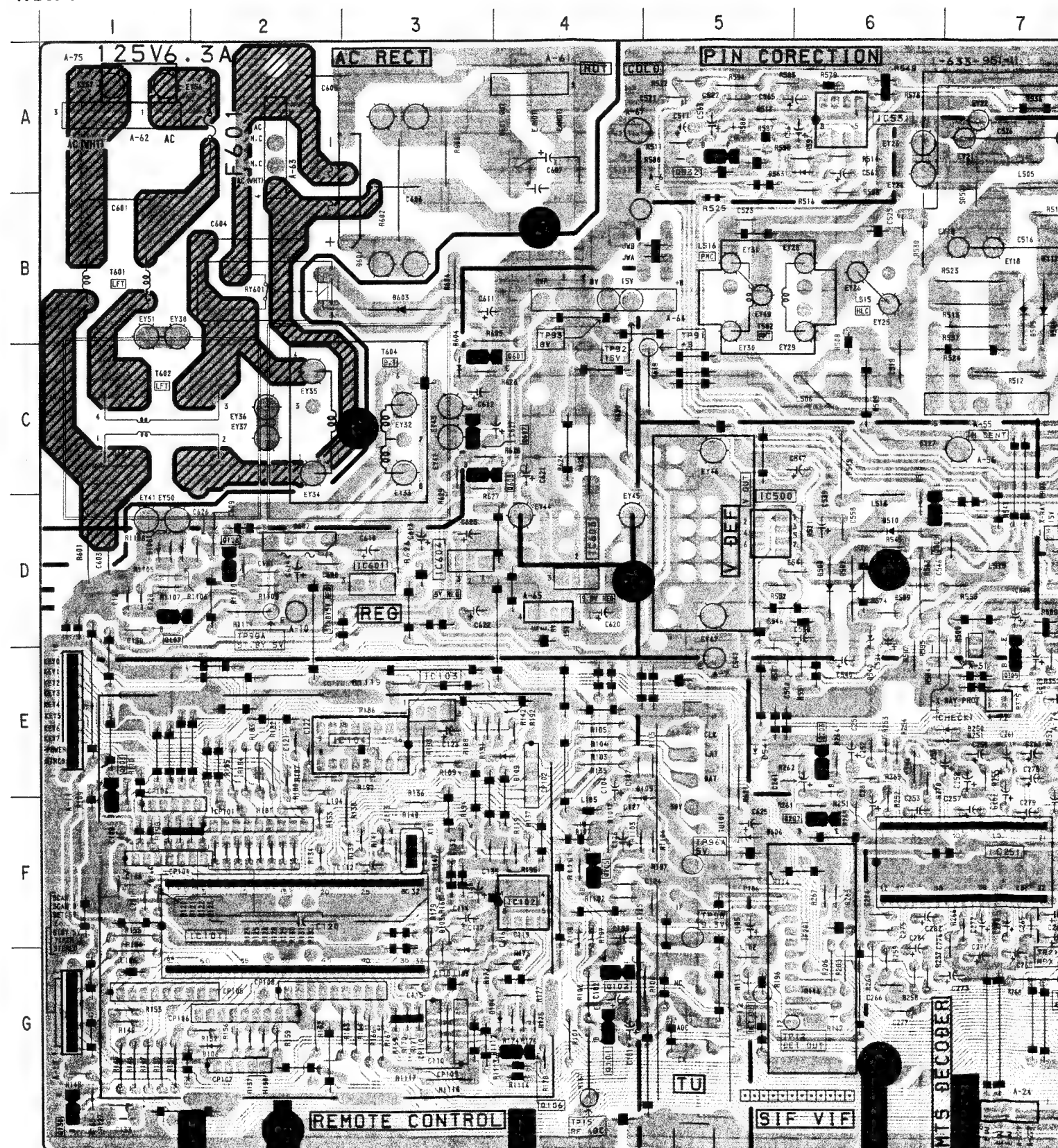
Note:

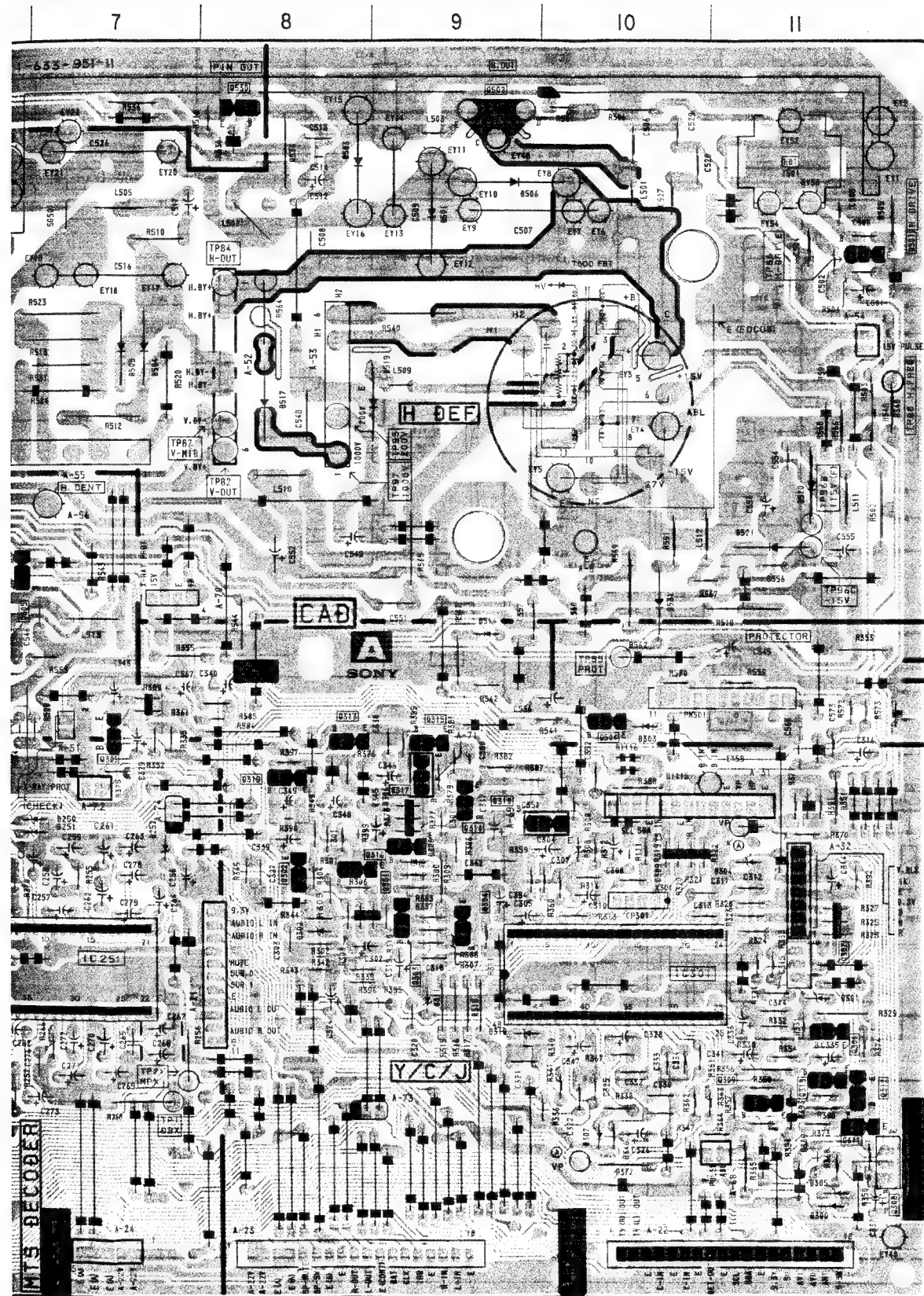
The components identified by shading and mark are critical for safety. Replace only with part number specified.

Note:

Les composants identifiés par un trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

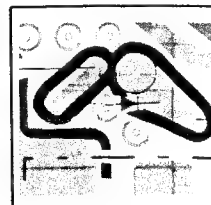
— A Board —





A Board

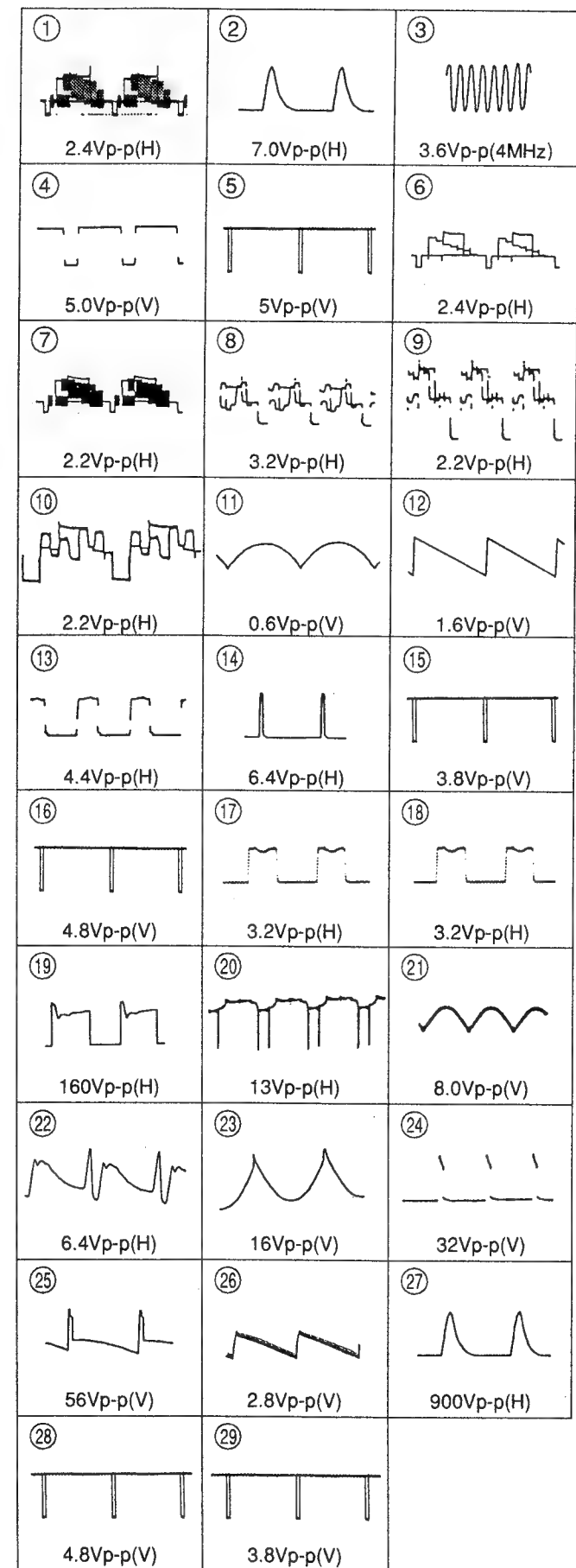
IC	TRANSISTOR	DIODE
IC101 F-2	Q316 E-9	D506 A-9
IC102 F-4	Q317 E-9	D509 D-6
IC103 E-3	Q318 G-11	D510 D-6
IC104 E-3	Q501 B-11	D514 D-9
IC251 F-7	Q502 A-9	D515 D-6
IC301 F-10	Q504 E-10	D517 C-8
IC500 D-5	Q505 D-6	D519 C-8
IC531 A-6	Q530 A-8	D520 C-11
IC601 D-3	Q601 C-3	D521 C-11
IC603 D-4	Q607 C-3	D531 D-10
IC604 D-3	Q608 C-3	D540 D-6
		D563 A-6
		D601 B-3
		D602 D-2
		D603 B-3
		D604 C-3
		D606 F-5
TRANSISTOR	DIODE	TEST POINT
Q101 G-4	D103 G-3	TP1 G-7
Q102 G-4	D104 G-4	TP12 G-5
Q103 E-1	D105 E-4	TP15 G-4
Q105 F-4	D106 D-1	TP21 G-7
Q106 G-4	D107 F-4	TP82 C-8
Q107 D-1	D108 G-2	TP84 B-8
Q108 D-2	D109 E-4	TP85 D-10
Q130 G-1	D250 E-7	TP86 B-11
Q202 F-6	D251 E-7	TP87 C-8
Q203 E-6	D252 E-7	TP88 C-11
Q301 E-8	D300 G-11	TP91 C-4
Q302 E-8	D301 F-11	TP92 B-4
Q303 F-9	D302 F-8	TP93 B-4
Q304 F-9	D303 E-10	TP95 C-8
Q305 E-7	D304 E-11	TP96A F-5
	D305 G-11	TP96B C-11
Q306 F-11	D306 E-9	TP96C C-11
Q307 F-11	D307 G-10	TP97 C-8
Q308 G-11	D308 E-10	TP98 F-5
Q309 G-10	D310 F-9	TP99A D-2
Q310 E-10	D311 F-9	
Q311 G-11	D500 D-6	
Q312 G-11	D501 A-9	
Q313 E-8	D502 D-6	
Q314 E-9	D503 A-8	
Q315 E-9	D504 B-7	
	D505 B-7	



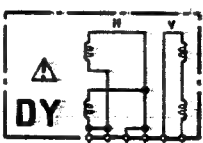
NOTE:

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

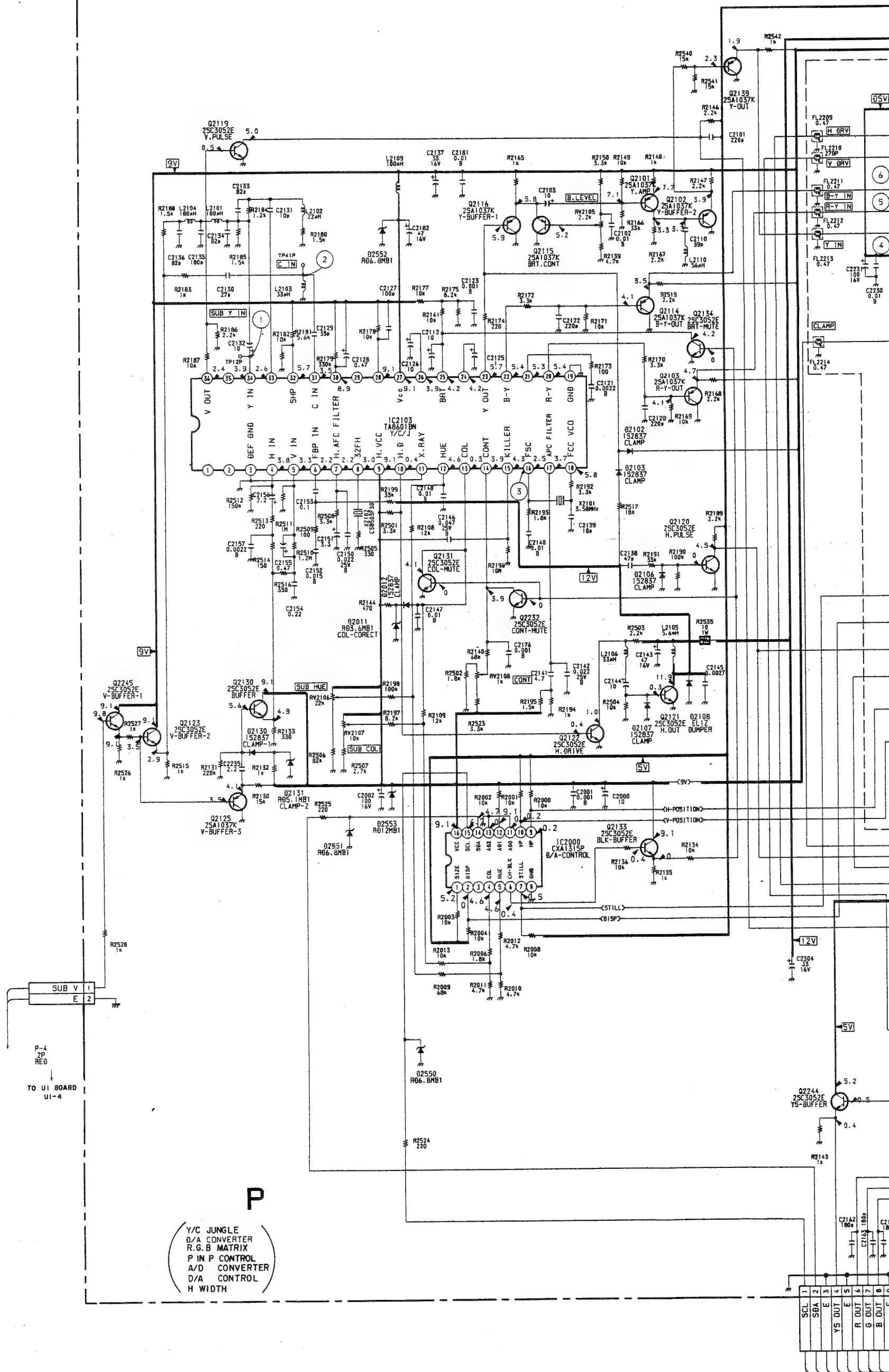
WAVEFORMS A BOARD

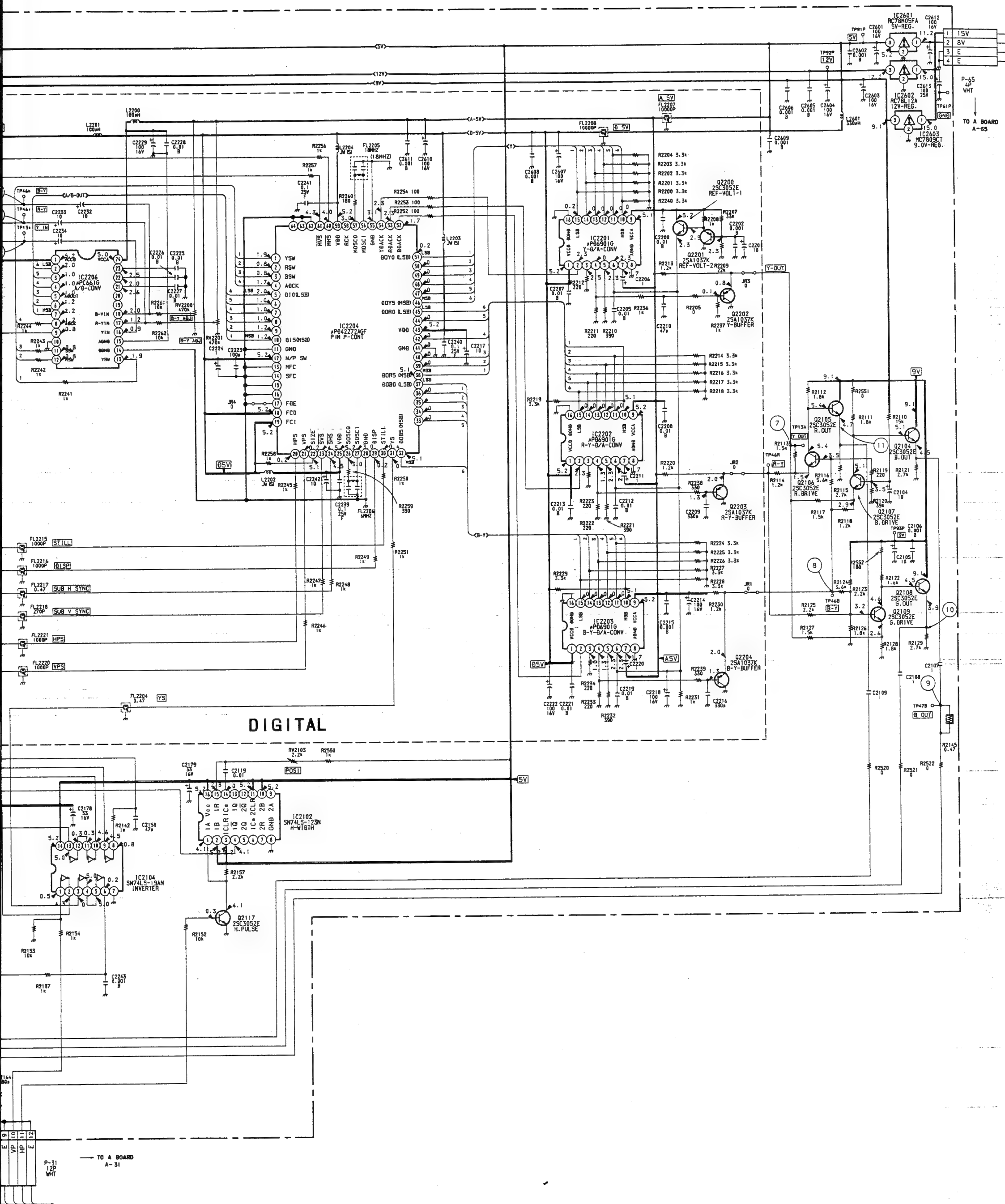


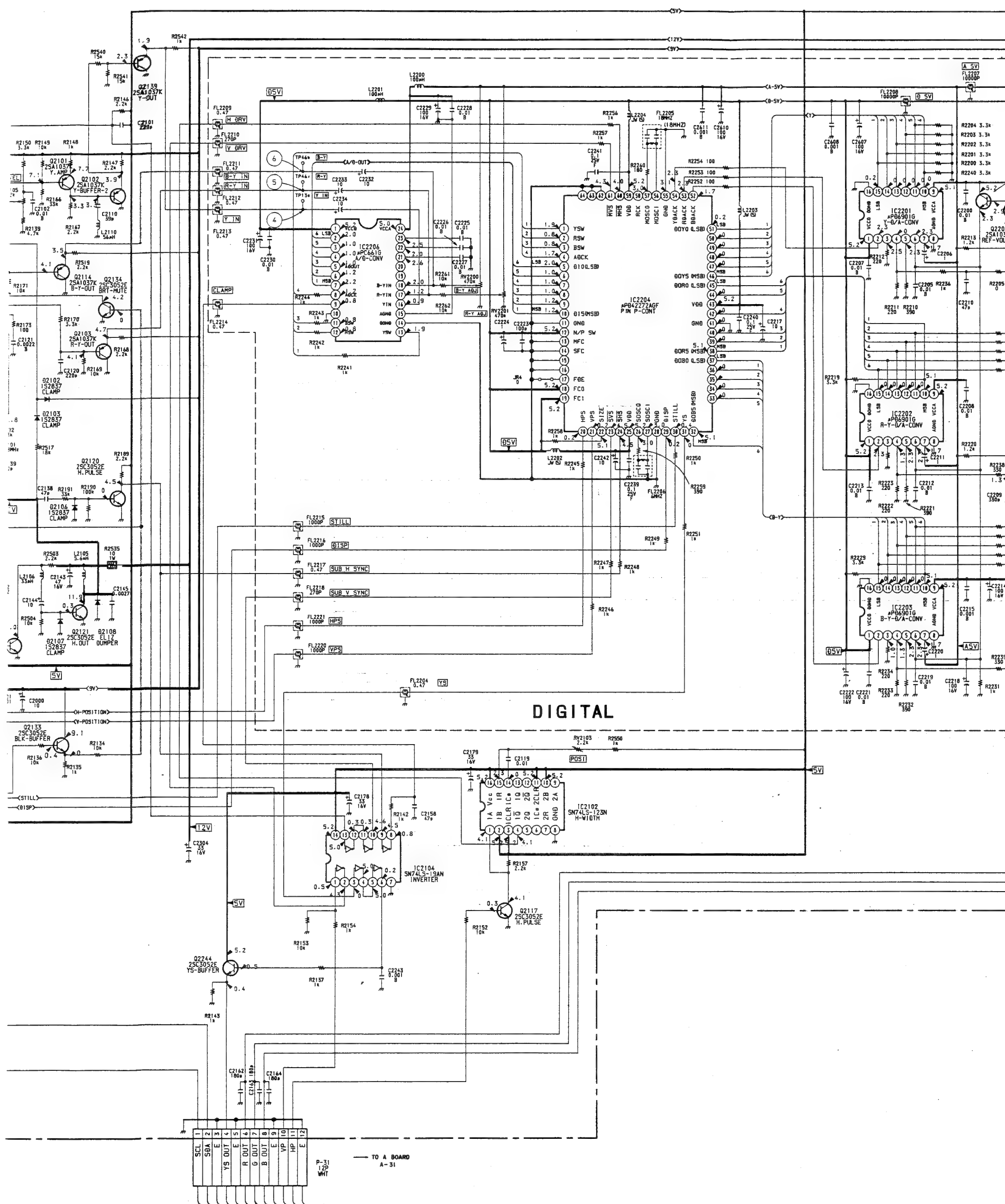


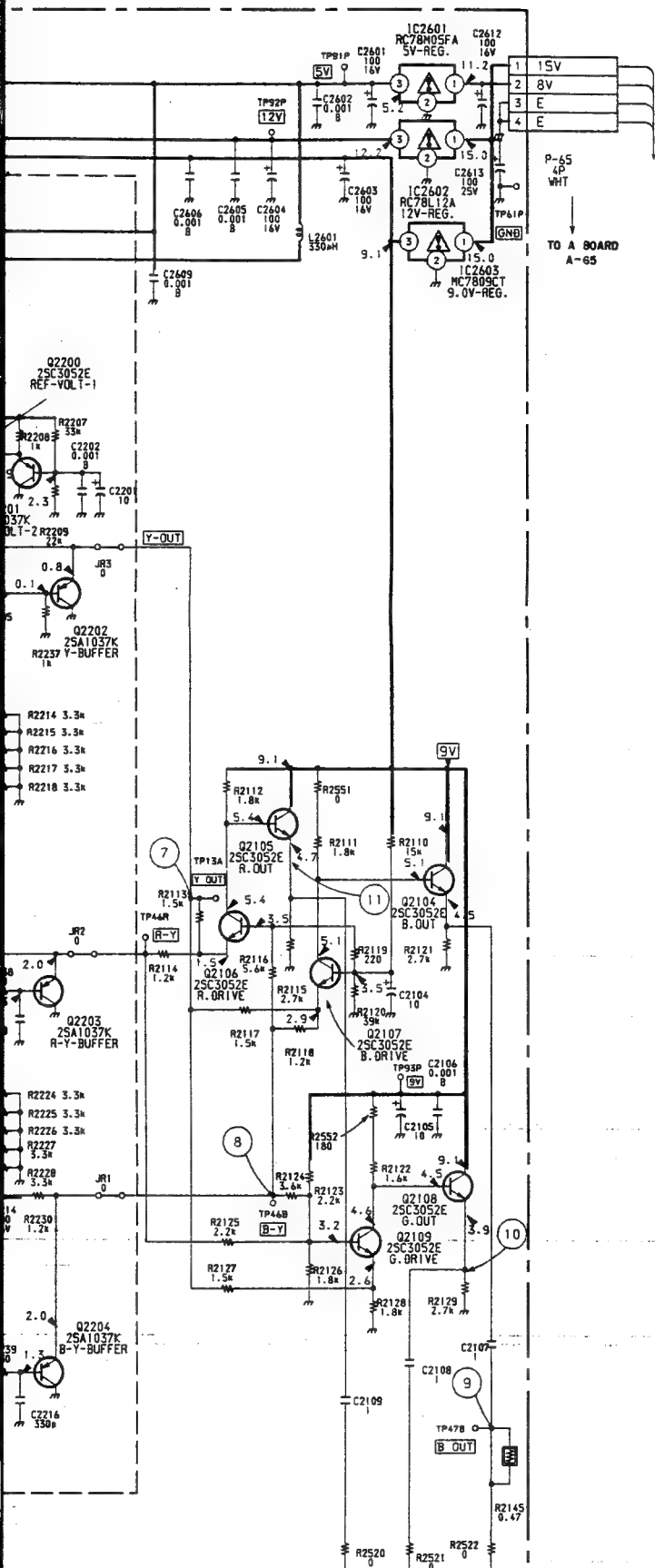
[illegible]

(KV-27EXR25 only)

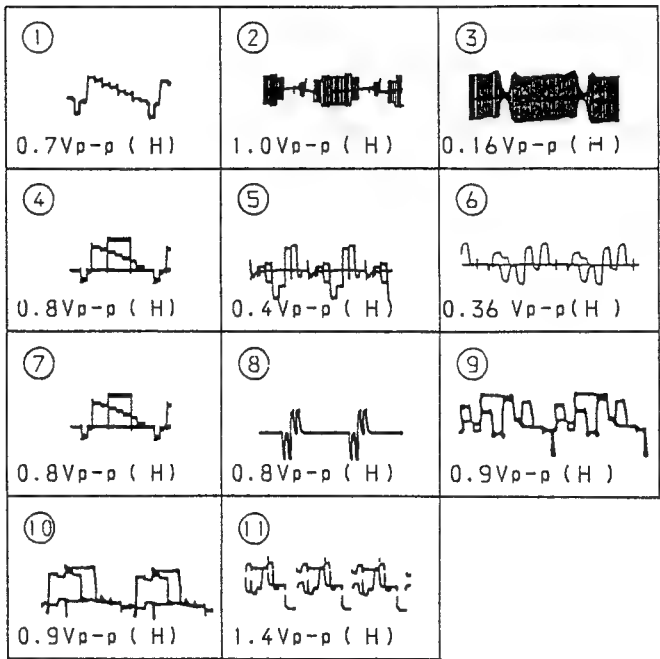




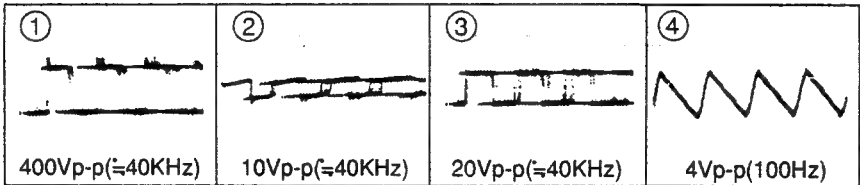




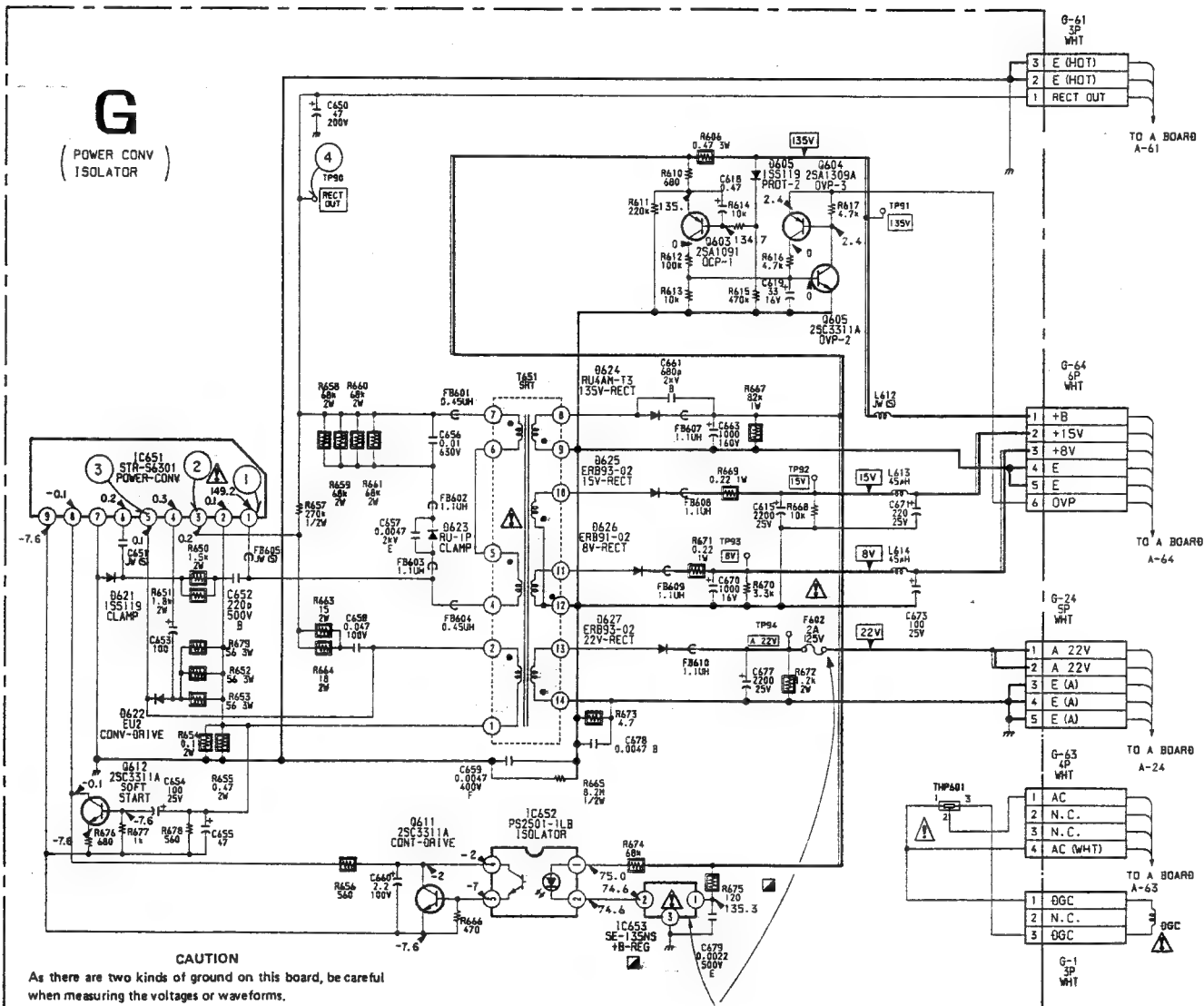
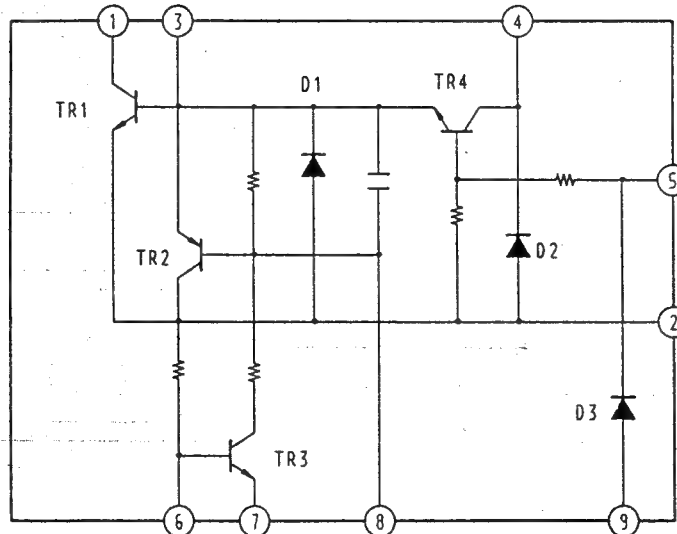
WAVEFORMS P BOARD (KV-27EXR25 only)



WAVEFORMS G BOARD



G BOARD IC651 STR-S6301



CAUTION
 When taking a broken fuse (F602) off, discharge across C577 to avoid shock hazard.

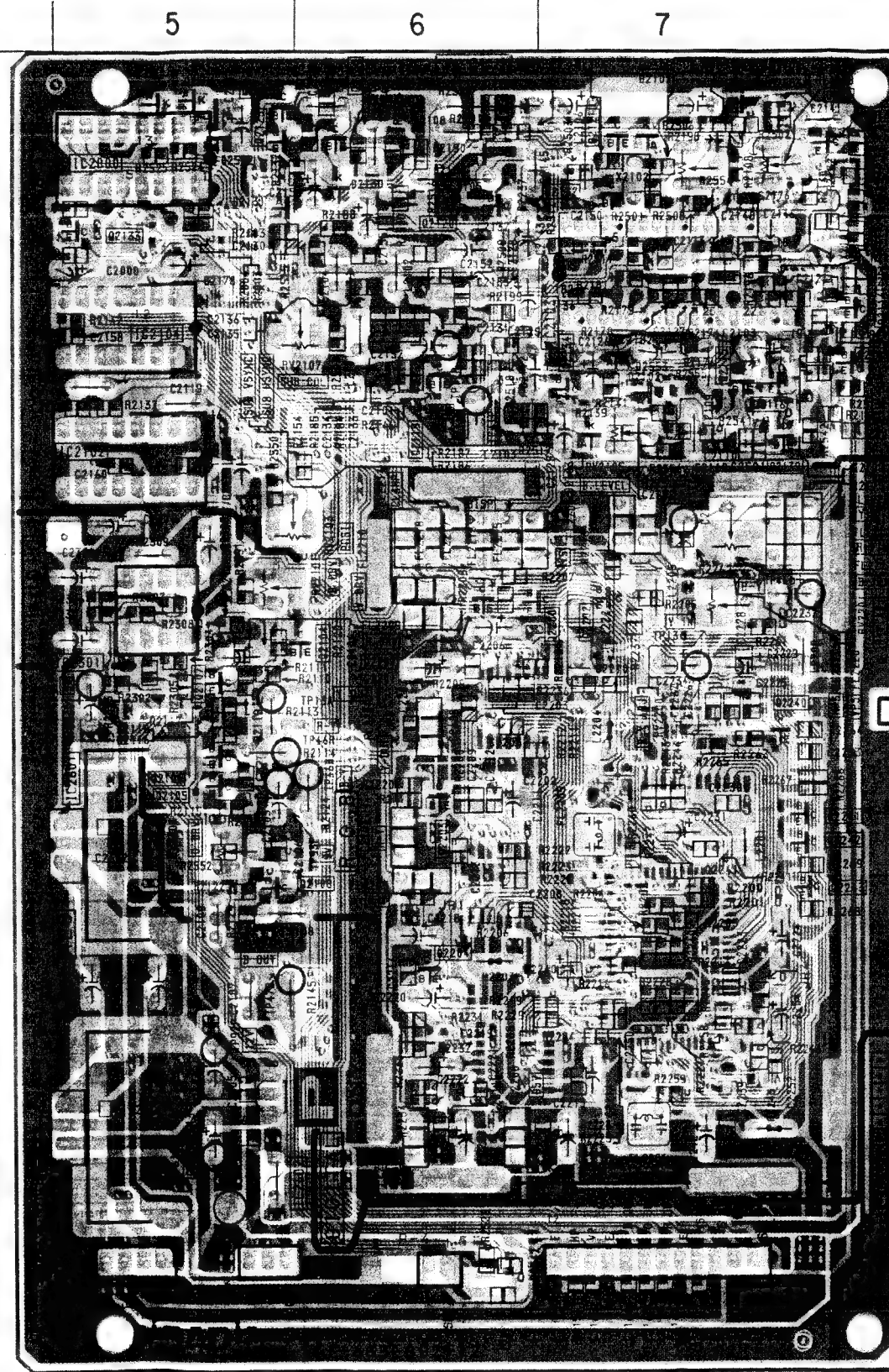
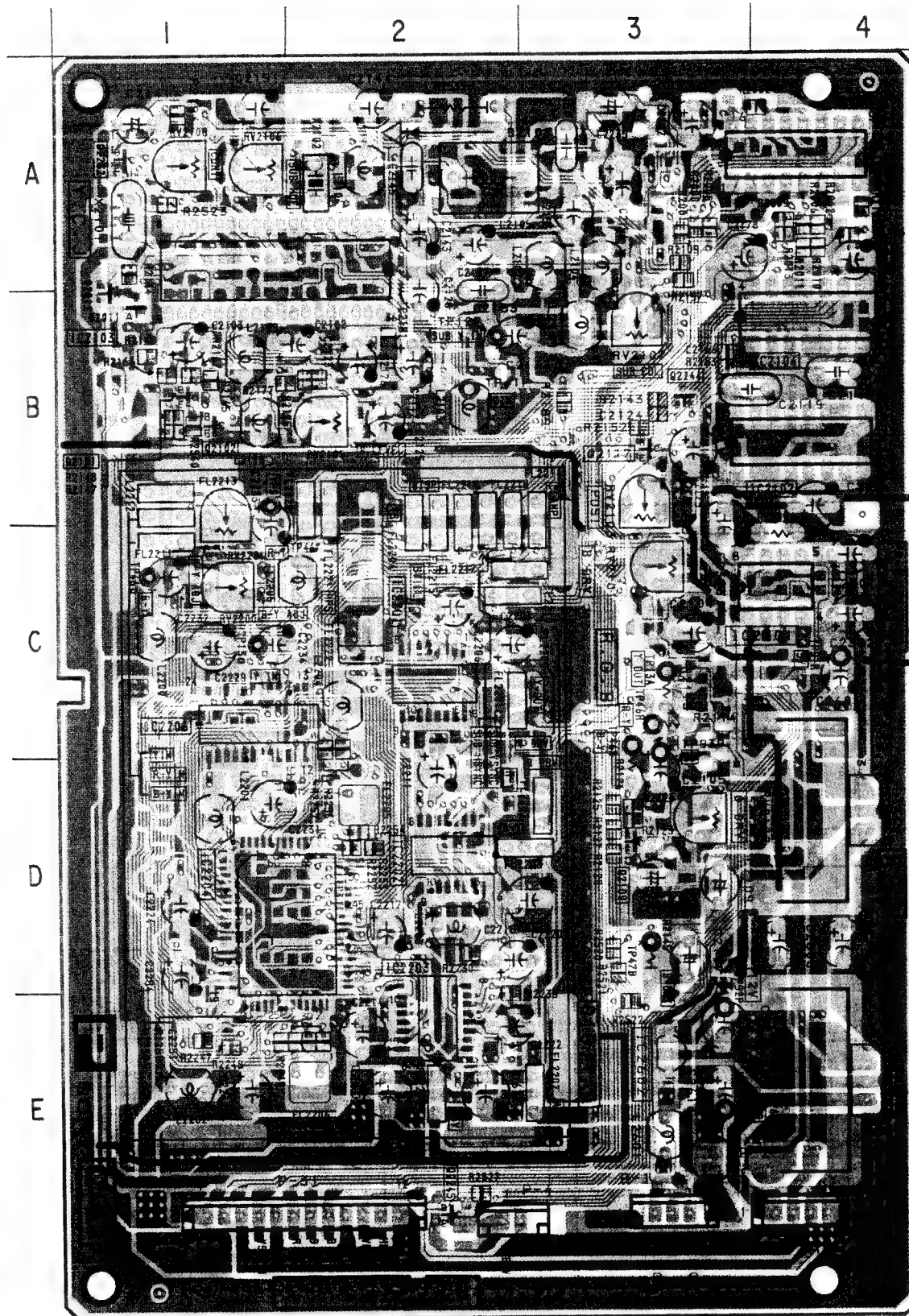
CAUTION
 When replacing IC653, be sure to check the B+ line voltage value. Refer to the Safety Adjustment Section.

P [Y/C DECODER, D/A CONVERTER,
R-Y/B-Y OUT, R.G.B MATRIX]

— P Board — (KV-27EXR25 only)

— Component side —

— Conductor side —



P Board

IC	TRANSISTOR	DIODE
IC2000 A-5	Q2121 A-7	D2551 A-5
IC2102 B-5	Q2122 A-7	D2552 A-5
IC2103 A-7	Q2123 A-5	D2553 B-7
IC2104 B-5	Q2125 A-5	VARIABLE RESISTOR
IC2201 C-2	Q2130 A-6	
IC2202 D-2	Q2131 A-7	RV2103 B-5
IC2203 E-2	Q2133 A-5	RV2105 B-7
IC2204 D-1	Q2134 B-7	RV2106 A-7
IC2206 C-1	Q2139 B-7	RV2107 B-6
IC2601 D-5	Q2200 C-6	RV2108 A-7
IC2602 E-5	Q2201 C-6	RV2200 C-7
IC2603 E-5	Q2202 C-7	RV2201 C-7
TRANSISTOR	Q2203 D-6	TEST POINT
	Q2204 D-6	
	Q2232 A-1	
	Q2244 B-3	
Q2101 B-1	Q2245 E-2	TP12P B-6
Q2102 B-1	DIODE	TP13A C-5
Q2103 B-7		TP13a C-7
Q2104 C-6	D2011 B-1	TP41P B-6
Q2105 D-5		TP46B C-6
Q2106 C-5		TP46R C-5
Q2107 C-5		TP46b C-7
Q2108 D-5	D2102 B-7	TP46r B-7
Q2109 D-3	D2103 B-7	TP47B D-5
Q2114 B-7	D2106 A-6	TP61P E-5
Q2115 B-7	D2107 A-7	TP91P C-5
Q2116 B-7	D2108 A-6	TP92P E-5
Q2117 B-3	D2130 A-6	TP93P D-5
Q2119 B-6	D2131 A-5	
Q2120 A-6	D2550 A-5	

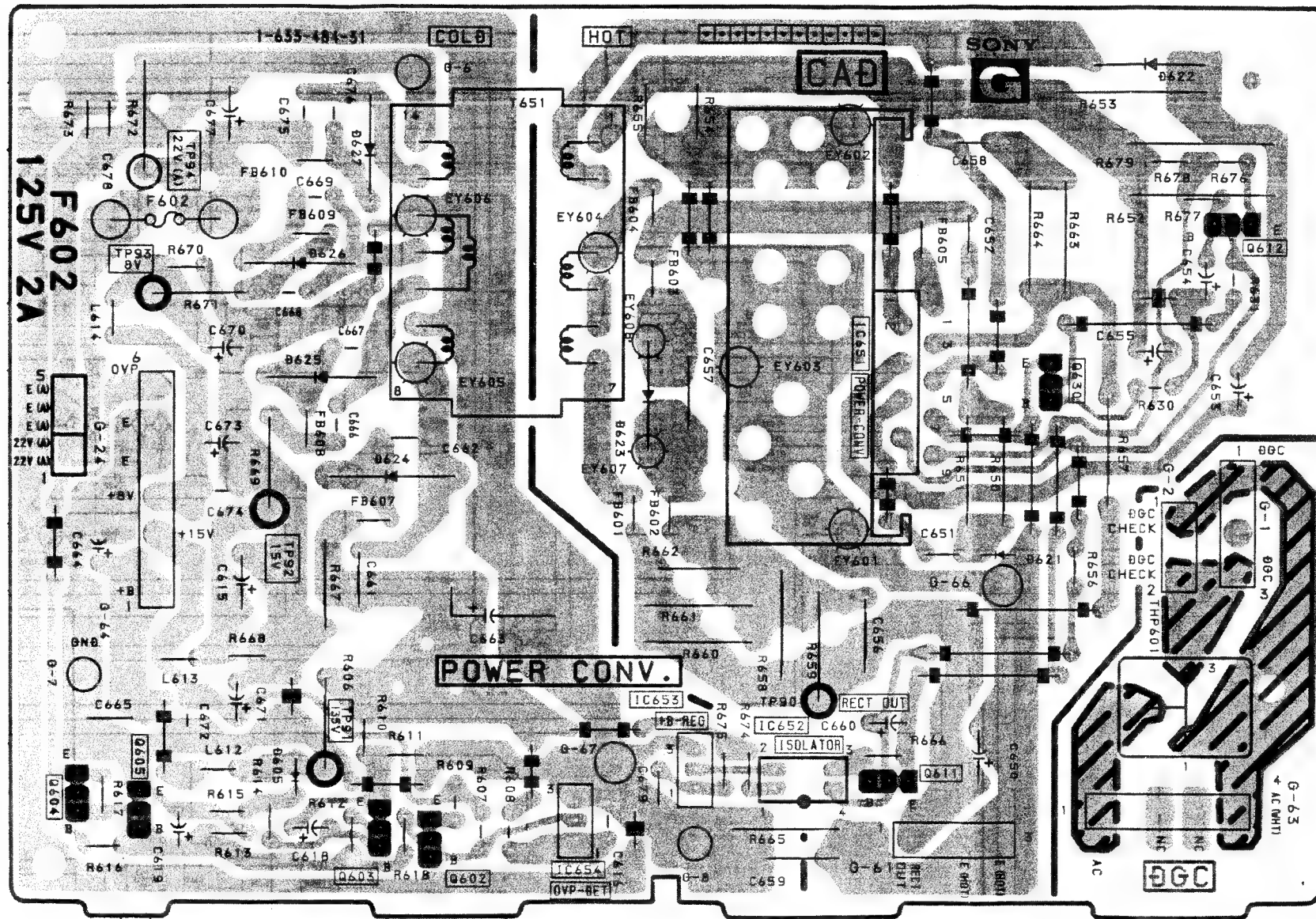
- : pattern from the side which enables seeing.
- : pattern of the rear side.

G

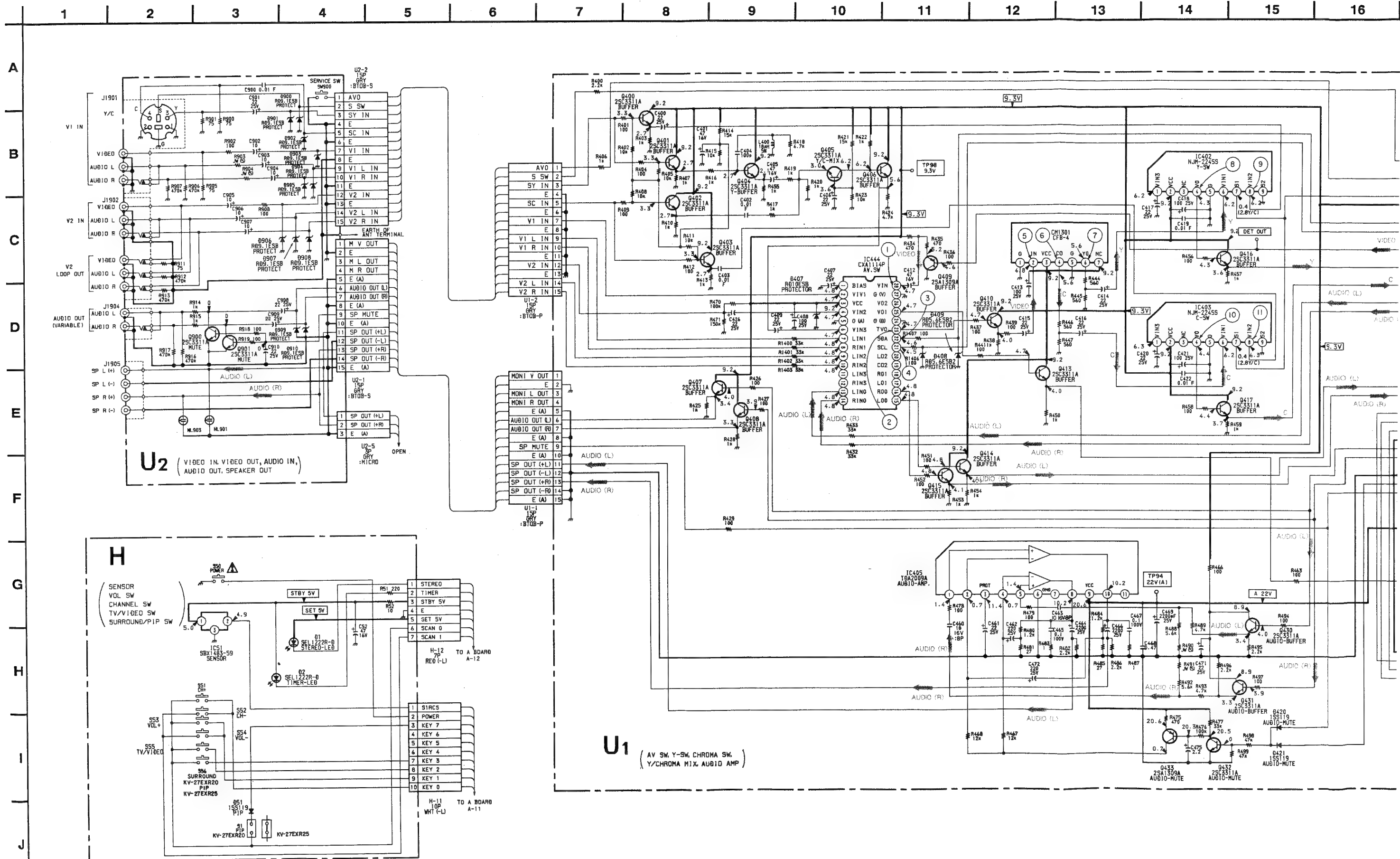
[POWER CONV, ISOLATOR]

— G Board —

DIODE	
12551	A-5
12552	A-5
12553	B-7
VARIABLE RESISTOR	
1V2103	B-5
1V2105	B-7
1V2106	A-7
1V2107	B-6
1V2108	A-7
1V2200	C-7
1V2201	C-7
TEST POINT	
P12P	B-6
P13A	C-5
P13a	C-7
P41P	B-6
P46B	C-6
P46R	C-5
P46b	C-7
P46r	B-7
P47B	D-5
P61P	E-5
P91P	C-5
P92P	E-5
P93P	D-5



enables seeing.



16

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25

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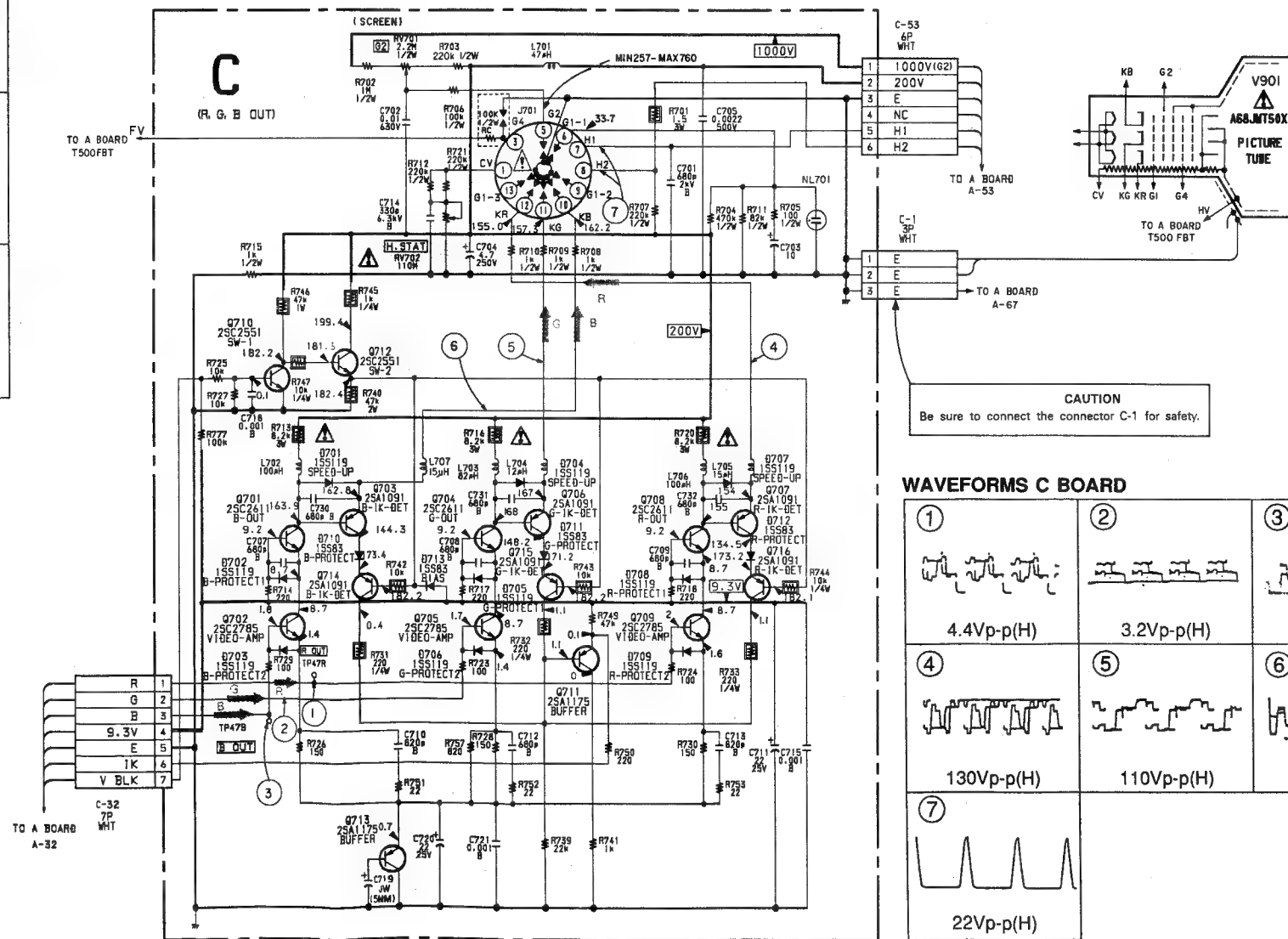
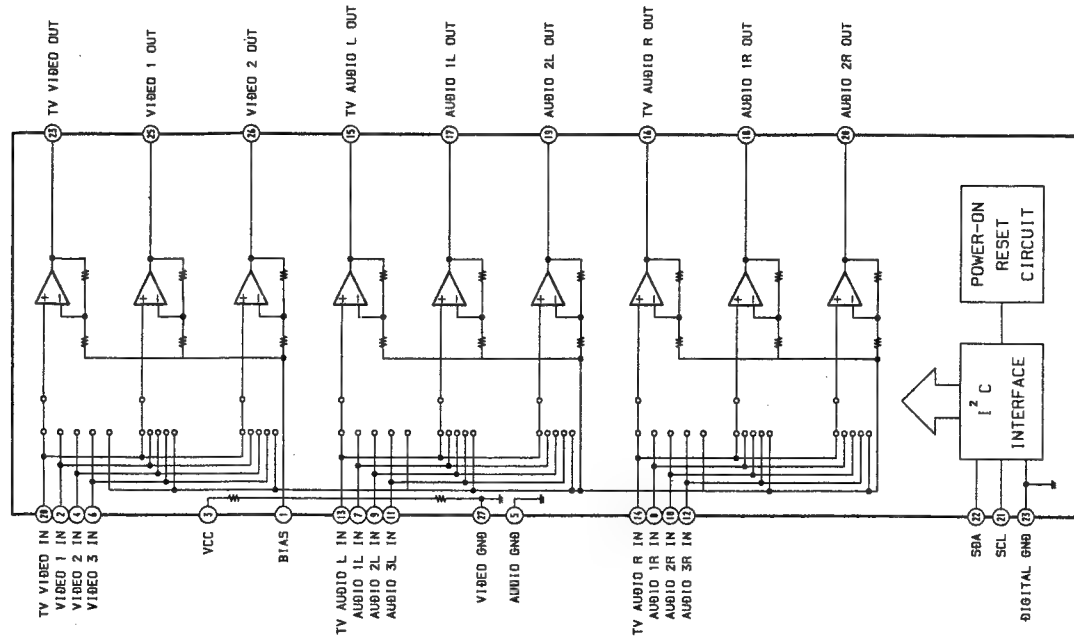
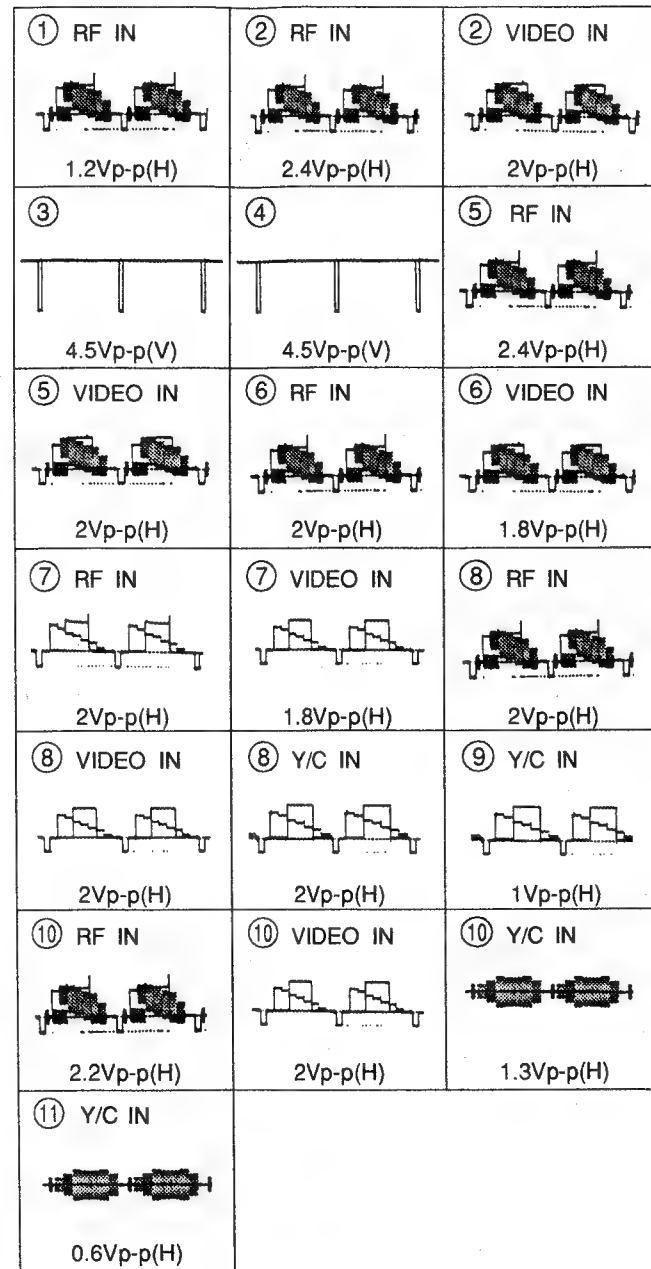
28

29

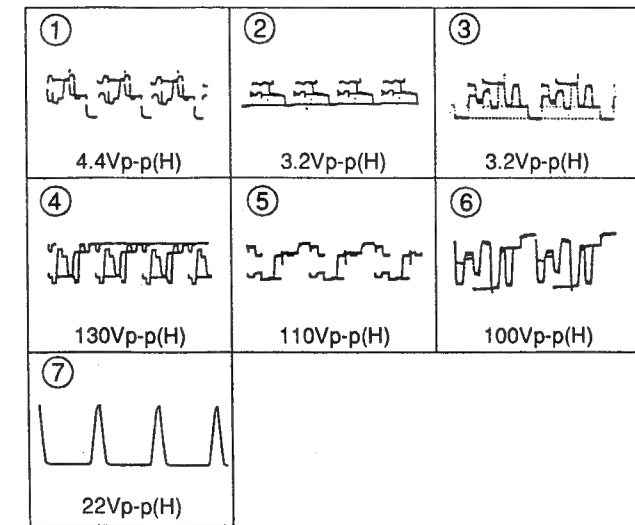
30

U1 BOARD IC444 CXA1114P

WAVEFORMS U1 BOARD

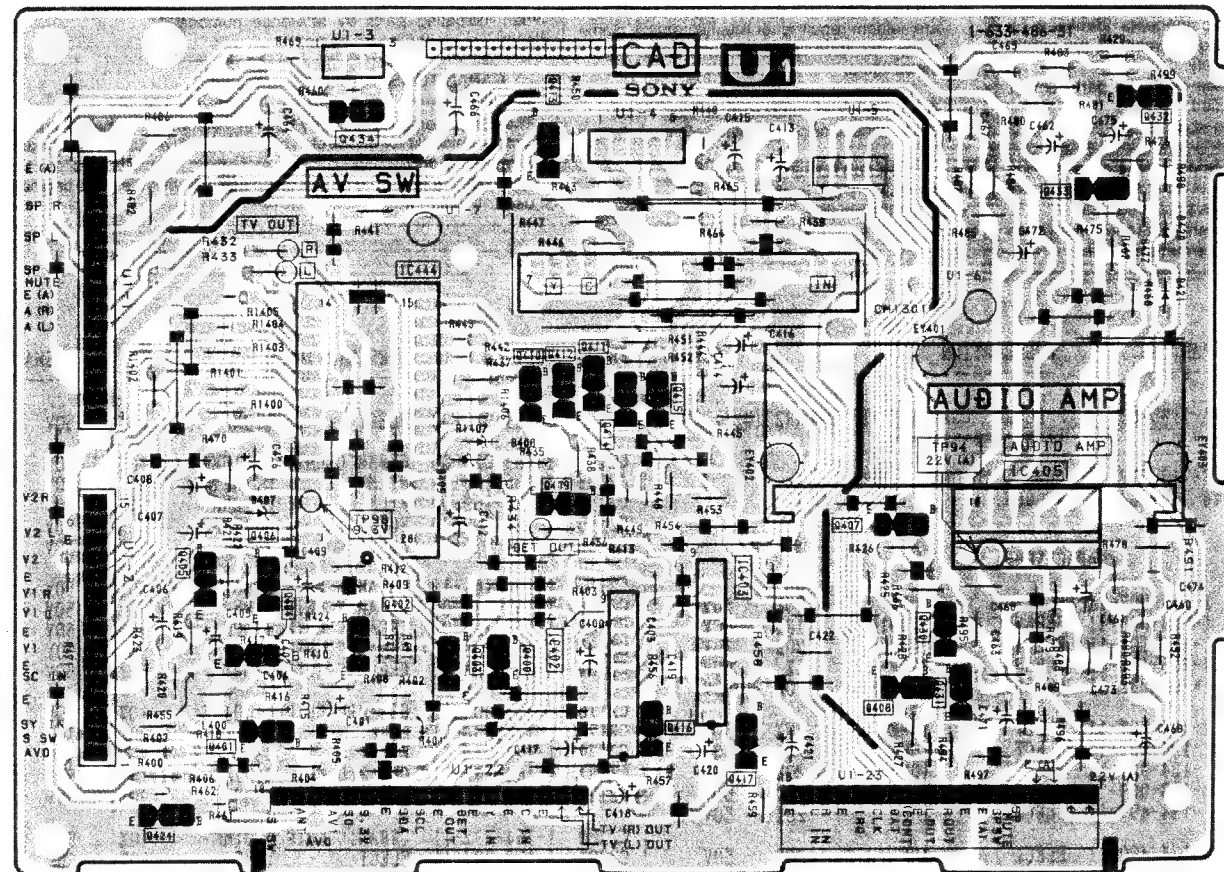


WAVEFORMS C BOARD

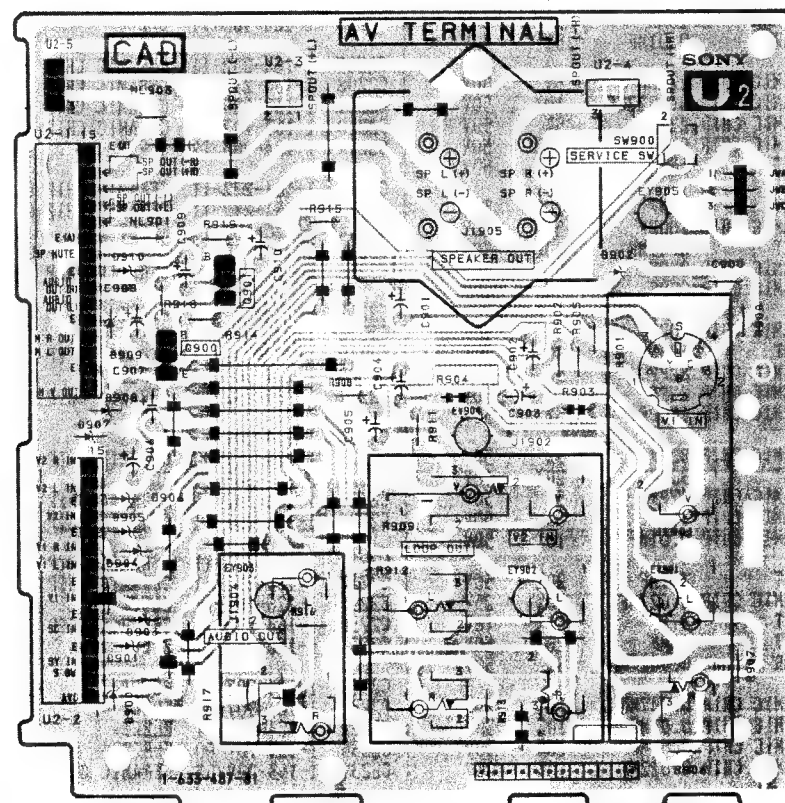


U1 [AV.SW, Y-SW, CHROMA SW,
Y/CHROMA MIX, AUDIO AMP]**U2** [VIDEO IN, VIDEO OUT,
AUDIO OUT, SPEAKER OUT]**C** [R.G.B. OUT]**H** [SENSOR, VOL SW, CHANNEL SW,
TV/VIDEO SW, SURROUND/PIP SW]

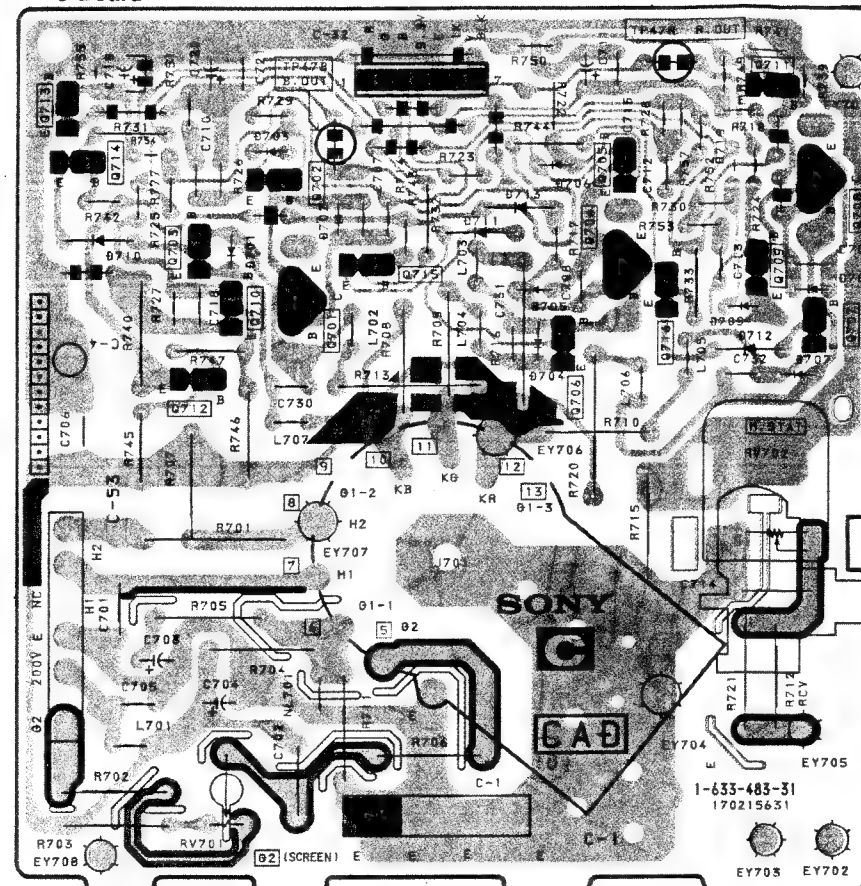
— U1 Board —



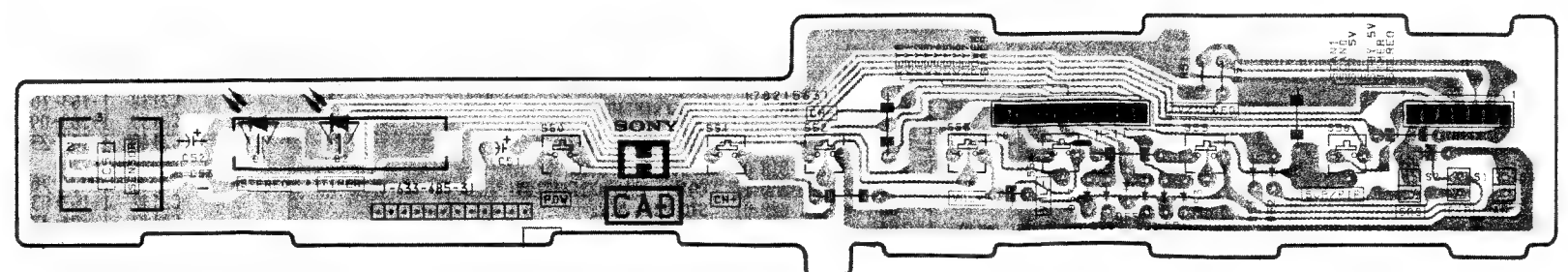
— U2 Board —



— C Board —



— H Board —



6-4

CX

28

CX

2

CX

MB

SN

18

CX

48

M3

16

MC

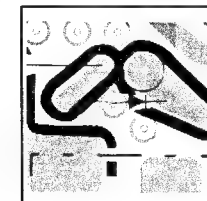
RC

RD

UP

MN

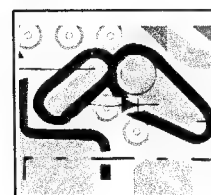
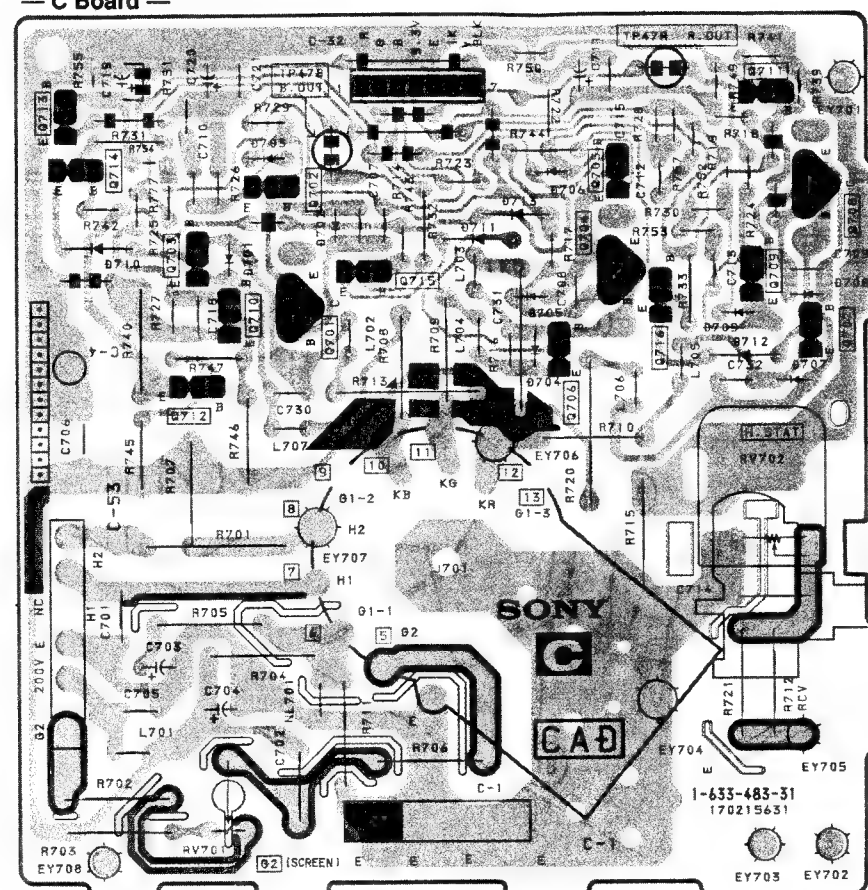
NJ

**NOTE:**

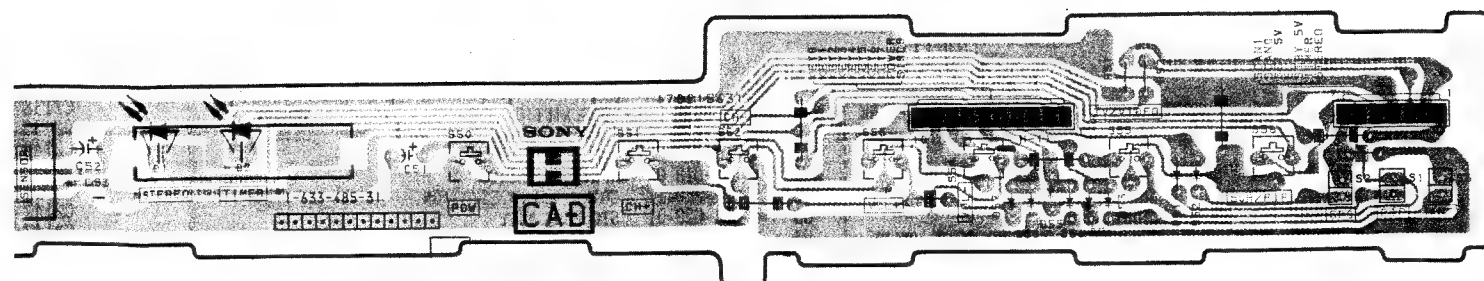
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

H [SENSOR, VOL SW, CHANNEL SW,
TV/VIDEO SW, SURROUND/PIP SW]

— C Board —

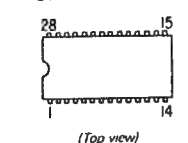


NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

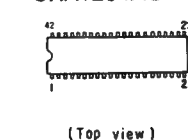


6-4. SEMICONDUCTORS

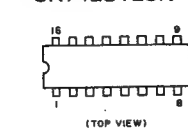
CXA1114P



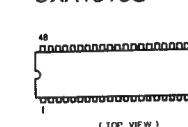
CXA1264AS



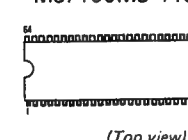
CXA1315P
MB88201-638L
SN74LS123N



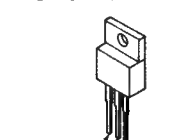
CXA1313S



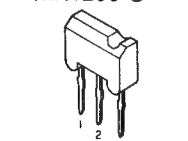
M37100M8-115SP



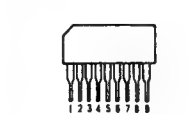
MC7809CT
RC7809FA
RD78M05FA
UPC7893HF



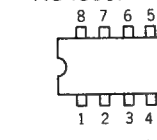
MN1280-S



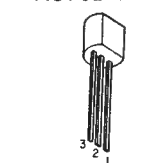
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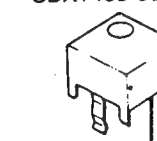
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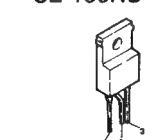
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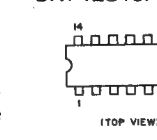
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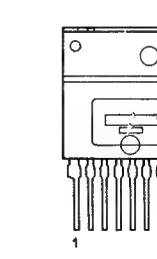
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SN74LS19AN



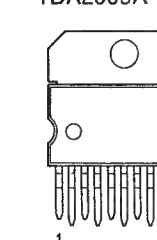
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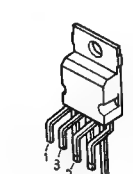
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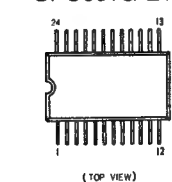
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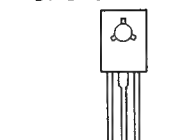
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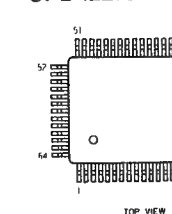
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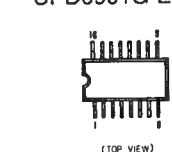
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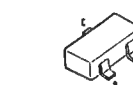
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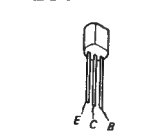
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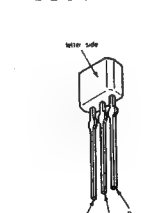
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2SA812
2SC1623
2SC2713
2SC3052E
2SC3722K



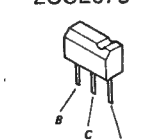
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2SA10910
2SA1091R
2SC2551
2SC25510



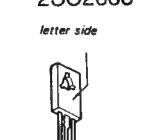
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2SC2785
2SC3311A



2SA937
2SC1652
2SC2673



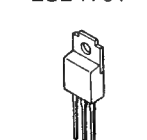
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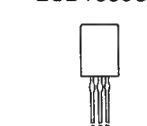
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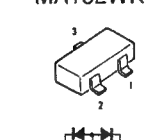
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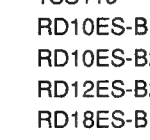
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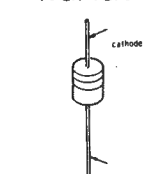
1S2837
MA152WK



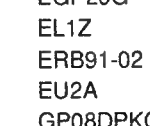
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1SS119



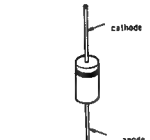
RD10ES-B
RD10ES-B2
RD12ES-B2
RD18ES-B1
RD18ES-B2
RD24ES-B1
RD33ES-B2
RD5.6ES-B2
RD6.2ES-B2
RD9.1ES-B
RD9.1ES-B2
WG713A



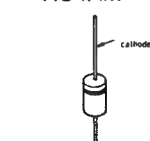
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EGP20G



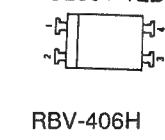
EL1Z
ERB91-02
EU2A
GP08DPKG23
RGP02-17
RGP10GPKG23
RGP15GPKG23



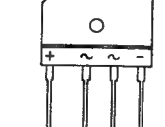
ERB93-02
RS3FS
RU-1P
RU-3AM
RU30A
RU4AM



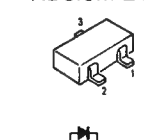
PC817-C
PS2501-1LB



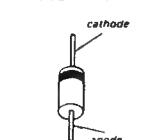
RBV-406H



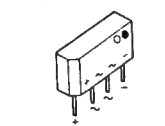
RD12M-B1
RD3.6M-B1
RD5.1M-B1
RD5.1M-B2
RD6.8M-B1



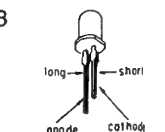
RU4DS



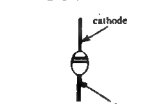
S1VB10-S
S1VB40



SEL1222R



U05G



SECTION 7
EXPLODED VIEWS

NOTE:

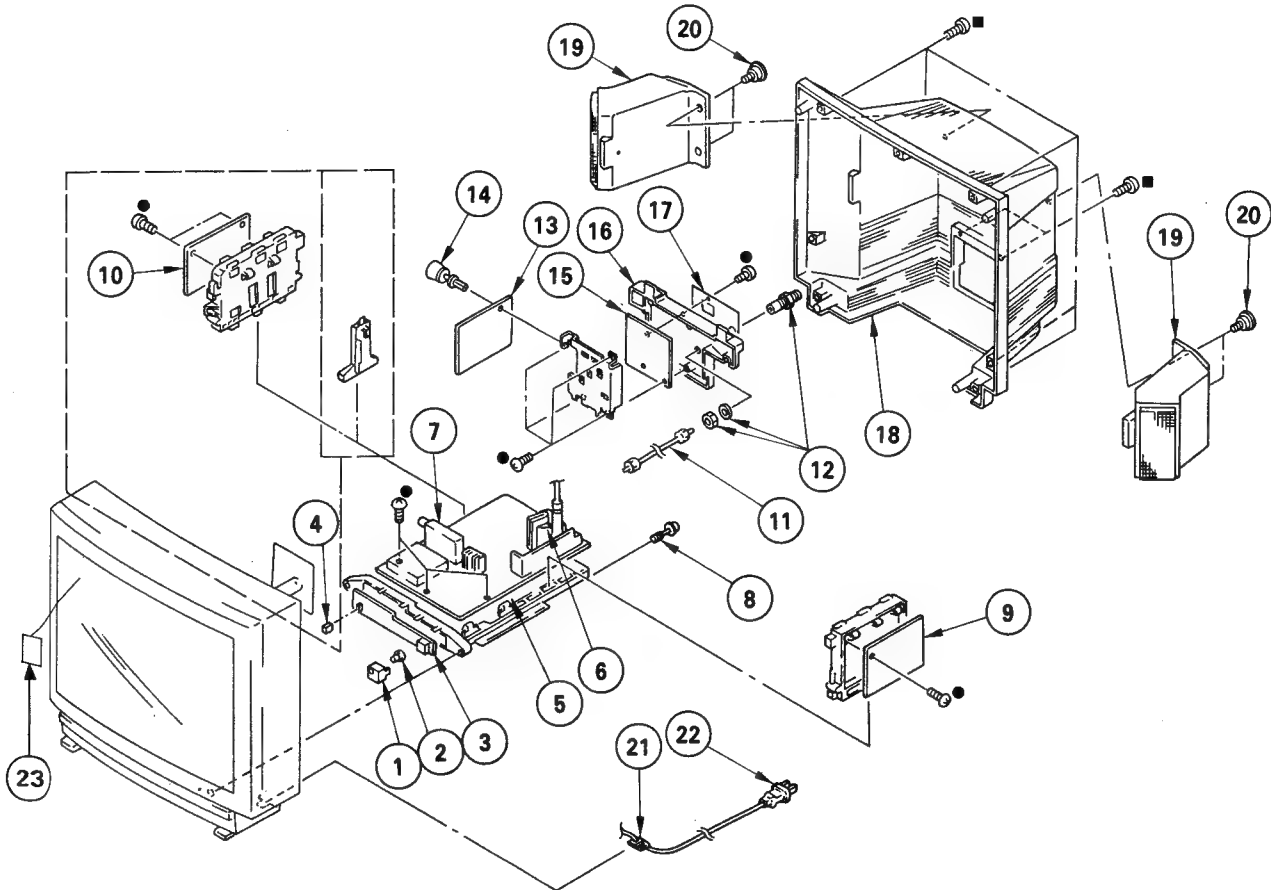
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark **▲** are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque **▲** sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

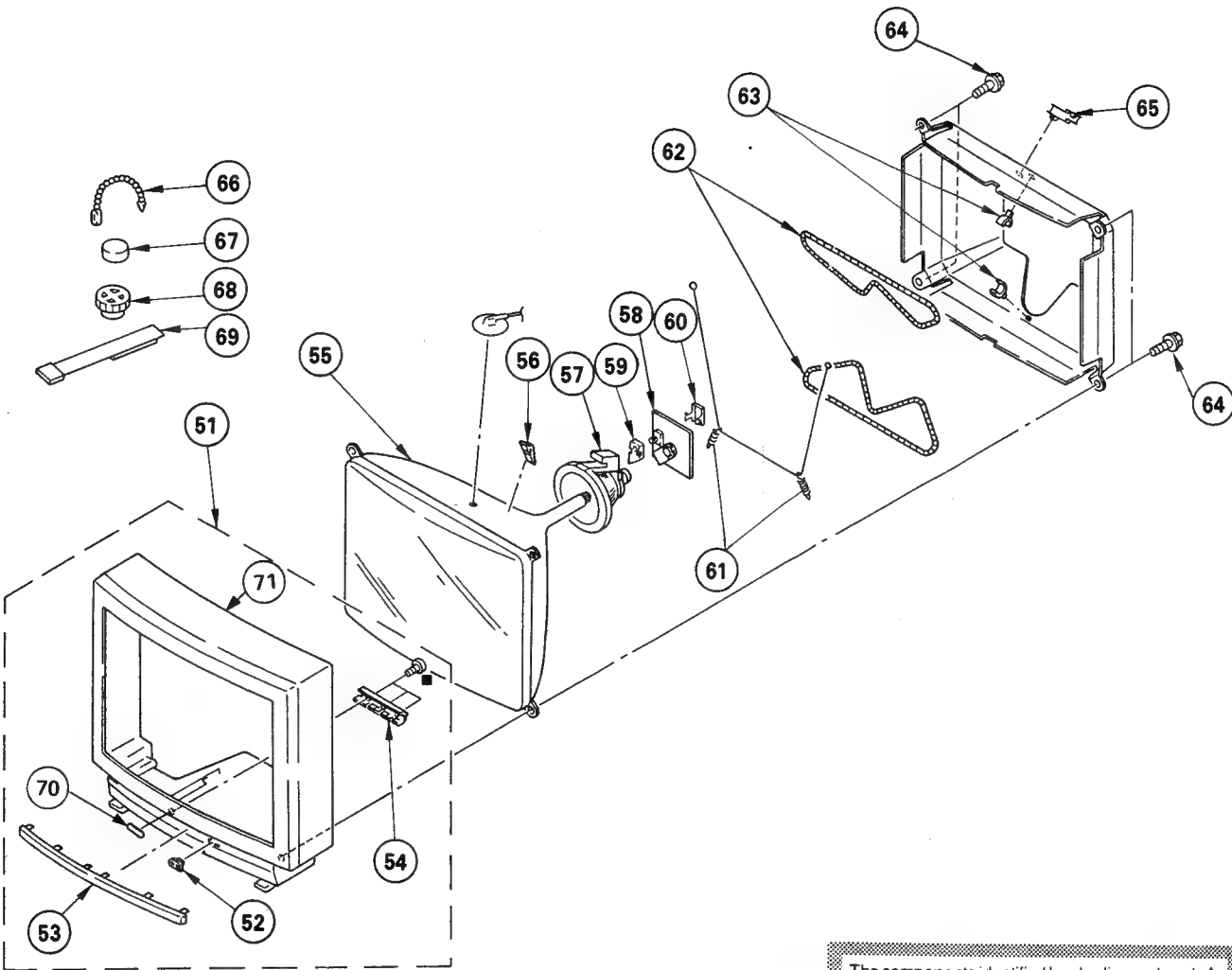
7-1. CHASSIS

- : BVTP3x12 7-685-648-79
- : BVTP4x16 7-685-663-79



7-2. PICTURE TUBE

- : BVTP4x16 7-685-663-79



The components identified by shading and mark **▲** are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque **▲** sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	*4-381-686-01	BRACKET (B), LIGHT GUIDE		12	1-561-306-00	JACK, PIN (F)	
2	*4-374-987-01	GUIDE, LIGHT		13	*A-1394-219-A	U1 BOARD, COMPLETE	
3	*1-633-485-31	H BOARD		14	*4-397-418-01	RIVET, T. TYPE	
4	*1-565-514-11	SOCKET, CONNECTOR 2P		15	*1-633-487-31	U2 BOARD	
		(KV-27EXR25(U/C) ONLY)		16	4-397-918-01	TERMINAL BOARD, ANTENNA	
5	*A-1296-697-A	A BOARD, COMPLETE		17	4-397-908-01	LABEL (A), ANTENNA	
6	▲.1-439-416-41	TRANSFORMER ASSY, FLYBACK (NX-1604)		18	4-397-928-01	COVER, REAR	
7	▲.1-465-384-11	TUNER, ET (BTP-202)		19	1-544-313-11	SPEAKER UNIT	
8	4-319-520-11	SCREW, SPECIAL (+PW4X30)		20	4-394-044-01	SCREW, STEP HILO TAPPING	
9	*A-1316-100-A	G BOARD, COMPLETE		21	▲.4-388-328-01	GROMMET, AC CORD	
10	*A-1195-038-A	P BOARD, COMPLETE (KV-27EXR25(U/C) ONLY)		22	▲.1-590-492-11	CORD, POWER (WITH CONNECTOR)	
11	*1-556-945-21	CABLE, P-P		23	*3-703-703-01	STICKER, SONY SYMBOL (50)	

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4397-906-1	CABINET ASSY (WITH BEZEL ASSY)		61	4-369-318-00	SPRING, TENSION	
52	*4-397-927-01	PLATE, LIGHT GUIDE		62	▲.1-426-350-11	COIL, DEMAGNETIZATION	
53	4-397-929-01	PANEL, ORNAMENTAL (KV-27EXR20(U) ONLY)		63	*4-371-629-01	STOPPER, WIRE	
	4-397-929-11	PANEL, ORNAMENTAL (KV-27EXR25(U/C) ONLY)		64	4-390-505-01	SCREW (7), TAPPING	
54	X-4397-910-1	BUTTON ASSY, MULTI		65	*4-387-284-01	HOLDER, LEAD	
55	▲.8-737-753-05	PICTURE TUBE (A68JMT50X)		66	4-308-870-00	CLIP, LEAD WIRE	
56	3-704-495-01	SPACER, DY		67	1-452-032-00	MAGNET, DISK; 10MM φ	
57	▲.1-451-275-31	DEFLECTION YOKE (Y28PFA)		68	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM φ	
58	*A-1331-055-A	C BOARD, COMPLETE		69	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	
59	*4-379-167-01	COVER (MAIN), CV		70	4-394-048-01	EMBLEM (NO.9), SONY	
60	*4-379-160-01	COVER (REAR LID), CV		71	4-397-931-01	BEZNET (KV-27EXR20(U) ONLY)	
					4-397-931-12	BEZNET (KV-27EXR25(U/C) ONLY)	

NOTE:

The components identified by shading and mark **▲** are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque **▲** sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO. PA

*A-

3-

*4-

C2000 1-
C2001 1-
C2002 1-
C2101 1-
C2102 1-

C2103 1-
C2104 1-
C2105 1-
C2106 1-
C2107 1-

C2108 1-
C2109 1-
C2110 1-
C2112 1-
C2119 1-

C2120 1-
C2121 1-
C2122 1-
C2123 1-
C2125 1-

C2126 1-
C2127 1-
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C2131 1-
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C2133 1-
C2134 1-
C2135 1-

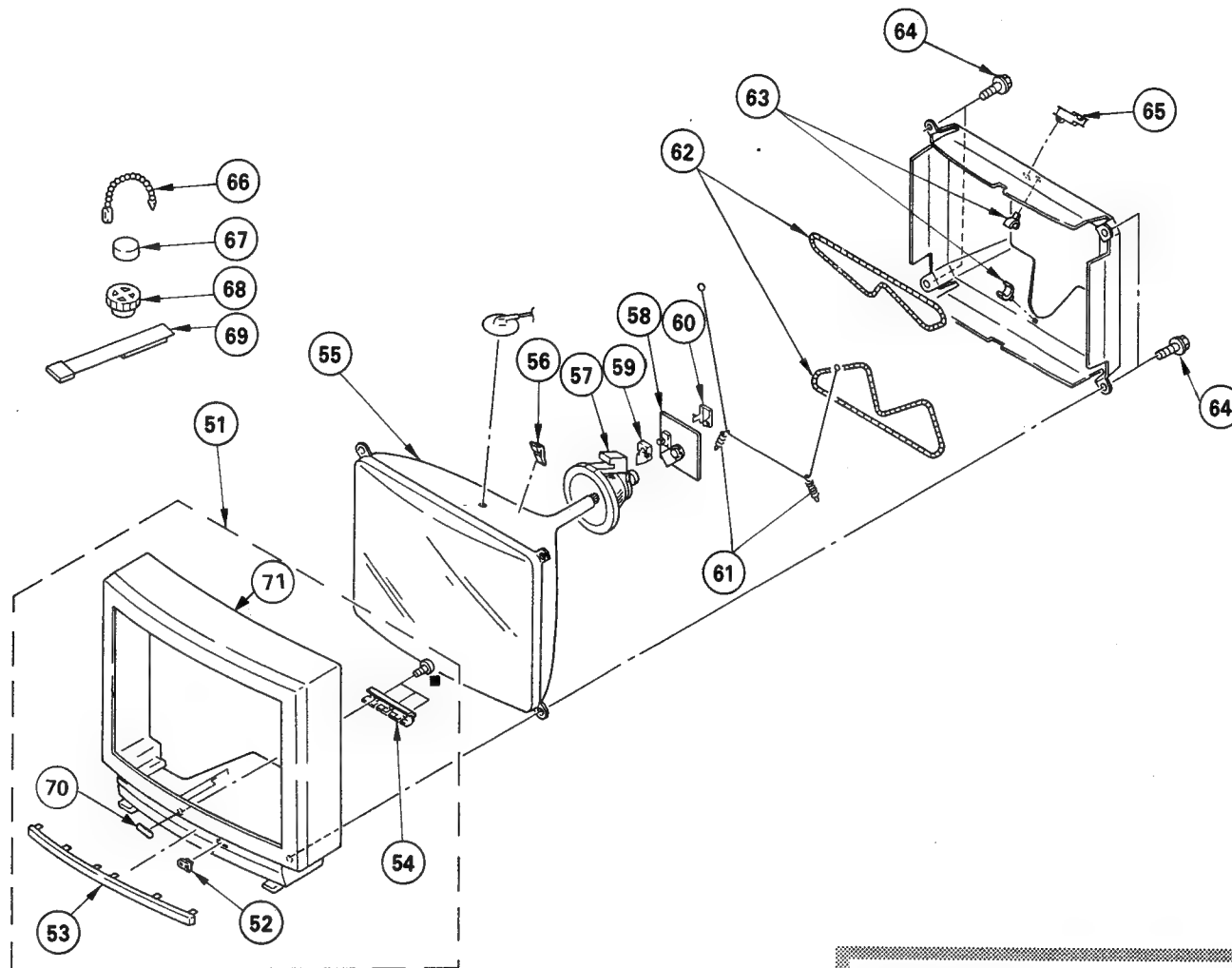
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C2139 1-
C2140 1-

C2141 1-
C2142 1-
C2143 1-
C2144 1-
C2145 1-

C2146 1-
C2147 1-
C2148 1-
C2150 1-

7-2. PICTURE TUBE

■ : BVTP4x16 7-685-663-79



The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4397-906-1	CABINET ASSY (WITH BEZEL ASSY)	52-54, 70-72	61	4-369-318-00	SPRING, TENSION	
52	*4-397-927-01	PLATE, LIGHT GUIDE		62	Δ 1-426-350-11	COIL, DEMAGNETIZATION	
53	4-397-929-01	PANEL, ORNAMENTAL (KV-27EXR20(U) ONLY)		63	*4-371-629-01	STOPPER, WIRE	
	4-397-929-11	PANEL, ORNAMENTAL (KV-27EXR25(U/C) ONLY)		64	4-390-505-01	SCREW (7), TAPPING	
54	X-4397-910-1	BUTTON ASSY, MULTI		65	*4-387-284-01	HOLDER, LEAD	
55	Δ 8-737-753-05	PICTURE TUBE (A68JMT50X)		66	4-308-870-00	CLIP, LEAD WIRE	
56	3-704-495-01	SPACER, DY		67	1-452-032-00	MAGNET, DISK; 10MM ϕ	
57	Δ 1-451-275-31	DEFLECTION YOKE (Y28PFA)		68	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ	
58	*A-1331-055-A	C BOARD, COMPLETE		69	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	
59	*4-379-167-01	COVER (MAIN), CV		70	4-394-048-01	EMBLEM (NO.9), SONY	
60	*4-379-160-01	COVER (REAR LID), CV		71	4-397-931-01	BEZNET (KV-27EXR20(U) ONLY)	
					4-397-931-12	BEZNET (KV-27EXR25(U/C) ONLY)	

P

NOTE:

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 8
ELECTRICAL PARTS LIST

Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

All resistors are in ohms
F: nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS

MF: μ F, PF: μ F

COILS

MMH: mH, UH: μ H

The components identified by Δ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
Should replacement be required, replace only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*A-1195-038-A	P BOARD, COMPLETE (KV-27EXR25(U/C) ONLY)	*****		C2151	1-123-382-00	ELECT 3.3MF	20% 50V
3-710-578-01	COVER, VOLUME, 6 MOLD			C2152	1-163-023-00	CERAMIC CHIP 0.015MF	10% 50V
*4-363-404-00	HOLDER, IC			C2153	1-136-165-00	FILM 0.1MF	5% 50V
<CAPACITOR>				C2154	1-136-169-00	FILM 0.22MF	5% 50V
C2000	1-124-907-11	ELECT 10MF	20% 50V	C2155	1-124-902-00	ELECT 0.47MF	20% 50V
C2001	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C2156	1-124-925-11	ELECT 2.2MF	20% 50V
C2002	1-126-101-11	ELECT 100MF	20% 16V	C2157	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C2101	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C2158	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C2102	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C2162	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
C2103	1-124-907-11	ELECT 10MF	20% 50V	C2163	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
C2104	1-124-907-11	ELECT 10MF	20% 50V	C2164	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
C2105	1-124-907-11	ELECT 10MF	20% 50V	C2176	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C2106	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C2178	1-124-034-51	ELECT 33MF	20% 16V
C2107	1-124-499-11	ELECT 1MF	20% 50V	C2179	1-124-034-51	ELECT 33MF	20% 16V
C2108	1-124-499-11	ELECT 1MF	20% 50V	C2181	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2109	1-124-499-11	ELECT 1MF	20% 50V	C2182	1-124-477-11	ELECT 47MF	20% 16V
C2110	1-163-107-00	CERAMIC CHIP 39PF	5% 50V	C2200	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2112	1-124-907-11	ELECT 10MF	20% 50V	C2201	1-124-907-11	ELECT 10MF	20% 50V
C2119	1-130-483-00	MYLAR 0.01MF	5% 50V	C2202	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C2120	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C2205	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2121	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	C2206	1-124-903-11	ELECT 1MF	20% 50V
C2122	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C2207	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2123	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C2208	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2125	1-124-903-11	ELECT 1MF	20% 50V	C2209	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C2126	1-124-907-11	ELECT 10MF	20% 50V	C2210	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C2127	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C2211	1-124-903-11	ELECT 1MF	20% 50V
C2128	1-124-902-00	ELECT 0.47MF	20% 50V	C2212	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2129	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C2213	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2130	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C2214	1-126-101-11	ELECT 100MF	20% 16V
C2131	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	C2215	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C2132	1-124-907-11	ELECT 10MF	20% 50V	C2216	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C2133	1-163-115-00	CERAMIC CHIP 82PF	5% 50V	C2217	1-124-907-11	ELECT 10MF	20% 50V
C2134	1-163-115-00	CERAMIC CHIP 82PF	5% 50V	C2218	1-126-101-11	ELECT 100MF	20% 16V
C2135	1-163-123-00	CERAMIC CHIP 180PF	5% 50V	C2219	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2136	1-163-115-00	CERAMIC CHIP 82PF	5% 50V	C2220	1-124-903-11	ELECT 1MF	20% 50V
C2137	1-124-034-51	ELECT 33MF	20% 16V	C2221	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2138	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C2222	1-126-101-11	ELECT 100MF	20% 16V
C2139	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	C2223	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C2140	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C2224	1-124-903-11	ELECT 1MF	20% 50V
C2141	1-124-768-11	ELECT 4.7MF	20% 50V	C2225	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2142	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C2226	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2143	1-124-477-11	ELECT 47MF	20% 16V	C2227	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2144	1-124-907-11	ELECT 10MF	20% 50V	C2228	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2145	1-130-476-00	MYLAR 0.0027MF	5% 50V	C2229	1-126-101-11	ELECT 100MF	20% 16V
C2146	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C2230	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2147	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C2231	1-126-101-11	ELECT 100MF	20% 16V
C2148	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C2232	1-124-907-11	ELECT 10MF	20% 50V
C2150	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C2233	1-124-907-11	ELECT 10MF	20% 50V
				C2234	1-124-907-11	ELECT 10MF	20% 50V
				C2235	1-124-767-00	ELECT 2.2MF	20% 50V
				C2239	1-163-038-00	CERAMIC CHIP 0.1MF	25V

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

KV-27EXR20/27EXR2!
RM-Y103 RM-Y10

P

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C2240	1-163-038-00	CERAMIC CHIP 0.1MF	25V	IC2204	8-759-149-90	IC UPD42272AGF	
C2241	1-163-038-00	CERAMIC CHIP 0.1MF	25V	IC2206	8-759-148-68	IC UPC661G	
C2242	1-124-907-11	ELECT 10MF	20% 50V	IC2601	Δ 8-759-982-31	IC RC78M05FA	
C2243	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	IC3602	Δ 8-759-982-26	IC RC78L12A	
C2304	1-124-034-51	ELECT 33MF	20% 16V	IC2603	Δ 8-759-030-99	IC MC7809CT	
C2601	1-126-101-11	ELECT 100MF	20% 16V	<COIL>			
C2602	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	L2101	1-408-424-00	INDUCTOR 180UH	
C2603	1-126-101-11	ELECT 100MF	20% 16V	L2102	1-408-413-00	INDUCTOR 22UH	
C2604	1-126-101-11	ELECT 100MF	20% 16V	L2103	1-408-415-00	INDUCTOR 33UH	
C2605	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	L2104	1-408-424-00	INDUCTOR 180UH	
C2606	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	L2105	1-408-163-00	INDUCTOR 5.6MMH	
C2607	1-126-101-11	ELECT 100MF	20% 16V	L2106	1-408-415-00	INDUCTOR 33UH	
C2608	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	L2109	1-408-421-00	INDUCTOR 100UH	
C2609	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	L2110	1-408-418-00	INDUCTOR 56UH	
C2610	1-126-101-11	ELECT 100MF	20% 16V	L2200	1-408-421-00	INDUCTOR 100UH	
C2611	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	L2201	1-408-421-00	INDUCTOR 100UH	
C2612	1-126-101-11	ELECT 100MF	20% 16V	L2601	1-408-427-00	INDUCTOR 330UH	
C2613	1-124-478-11	ELECT 100MF	20% 25V	<CONNECTOR>			
<DIODE>				P4	*1-564-505-11	PLUG, CONNECTOR 2P	
D2011	8-719-105-51	DIODE RD3.6M-B1		P31	*1-564-515-11	PLUG, CONNECTOR 12P	
D2012	8-719-400-18	DIODE MA152WK		P65	*1-564-507-11	PLUG, CONNECTOR 4P	
D2102	8-719-400-18	DIODE MA152WK		<TRANSISTOR>			
D2103	8-719-400-18	DIODE MA152WK		Q2101	8-729-216-22	TRANSISTOR 2SA1162-G	
D2106	8-719-400-18	DIODE MA152WK		Q2102	8-729-216-22	TRANSISTOR 2SA1162-G	
D2107	8-719-400-18	DIODE MA152WK		Q2103	8-729-216-22	TRANSISTOR 2SA1162-G	
D2108	8-719-302-43	DIODE EL1Z		Q2104	8-729-100-66	TRANSISTOR 2SC1623-L6	
D2130	8-719-400-18	DIODE MA152WK		Q2105	8-729-100-66	TRANSISTOR 2SC1623-L6	
D2131	8-719-105-82	DIODE RD5.1M-B2		Q2106	8-729-100-66	TRANSISTOR 2SC1623-L6	
D2550	8-719-106-16	DIODE RD6.8M-B1		Q2107	8-729-100-66	TRANSISTOR 2SC1623-L6	
D2551	8-719-106-16	DIODE RD6.8M-B1		Q2108	8-729-100-66	TRANSISTOR 2SC1623-L6	
D2552	8-719-106-70	DIODE RD12M-B1		Q2109	8-729-100-66	TRANSISTOR 2SC1623-L6	
D2553	8-719-106-70	DIODE RD12M-B1		Q2114	8-729-216-22	TRANSISTOR 2SA1162-G	
<FILTER>				Q2115	8-729-216-22	TRANSISTOR 2SA1162-G	
FL2204	1-249-377-11	CARBON 0.47 5%	1/4W F	Q2116	8-729-216-22	TRANSISTOR 2SA1162-G	
FL2205	1-404-892-11	COIL		Q2117	8-729-100-66	TRANSISTOR 2SC1623-L6	
FL2206	1-404-893-11	COIL		Q2119	8-729-100-66	TRANSISTOR 2SC1623-L6	
FL2207	1-236-071-11	ENCAPSULATED COMPONENT		Q2120	8-729-100-66	TRANSISTOR 2SC1623-L6	
FL2208	1-236-071-11	ENCAPSULATED COMPONENT		Q2121	8-729-271-32	TRANSISTOR 2SC2713-L	
FL2209	1-249-377-11	CARBON 0.47 5%	1/4W F	Q2122	8-729-100-66	TRANSISTOR 2SC1623-L6	
FL2210	1-236-129-11	ENCAPSULATED COMPONENT		Q2123	8-729-100-66	TRANSISTOR 2SC1623-L6	
FL2211	1-249-377-11	CARBON 0.47 5%	1/4W F	Q2125	8-729-216-22	TRANSISTOR 2SA1162-G	
FL2212	1-249-377-11	CARBON 0.47 5%	1/4W F	Q2130	8-729-100-66	TRANSISTOR 2SC1623-L6	
FL2213	1-249-377-11	CARBON 0.47 5%	1/4W F	Q2131	8-729-100-66	TRANSISTOR 2SC1623-L6	
FL2214	1-249-377-11	CARBON 0.47 5%	1/4W F	Q2133	8-729-100-66	TRANSISTOR 2SC1623-L6	
FL2215	1-236-163-11	ENCAPSULATED COMPONENT		Q2134	8-729-100-66	TRANSISTOR 2SC1623-L6	
FL2216	1-236-163-11	ENCAPSULATED COMPONENT		Q2139	8-729-216-22	TRANSISTOR 2SA1162-G	
FL2217	1-249-377-11	CARBON 0.47 5%	1/4W F	Q2200	8-729-100-66	TRANSISTOR 2SC1623-L6	
FL2218	1-236-129-11	ENCAPSULATED COMPONENT		Q2201	8-729-216-22	TRANSISTOR 2SA1162-G	
FL2220	1-236-163-11	ENCAPSULATED COMPONENT		Q2202	8-729-216-22	TRANSISTOR 2SA1162-G	
FL2221	1-236-163-11	ENCAPSULATED COMPONENT		Q2203	8-729-216-22	TRANSISTOR 2SA1162-G	
<IC>				Q2204	8-729-216-22	TRANSISTOR 2SA1162-G	
IC2000	8-752-035-53	IC CXA1315P		Q2232	8-729-100-66	TRANSISTOR 2SC1623-L6	
IC2102	8-759-901-23	IC SN74LS123N		Q2244	8-729-100-66	TRANSISTOR 2SC1623-L6	
IC2103	8-759-234-63	IC TA86018N-FA-1		Q2245	8-729-100-66	TRANSISTOR 2SC1623-L6	
IC2104	8-759-989-67	IC SN74LS19AN					
IC2201	8-759-148-69	IC UPD6901G					
IC2202	8-759-148-69	IC UPD6901G					
IC2203	8-759-148-69	IC UPD6901G					

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<RESISTOR>							
JR1	1-216-295-00	METAL GLAZE	0 5% 1/10W	R2165	1-216-049-00	METAL GLAZE	1K 5% 1/10W
JR2	1-216-295-00	METAL GLAZE	0 5% 1/10W	R2166	1-216-085-00	METAL GLAZE	33K 5% 1/10W
JR3	1-216-295-00	METAL GLAZE	0 5% 1/10W	R2167	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
JR4	1-216-295-00	METAL GLAZE	0 5% 1/10W	R2168	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R2000	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2169	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2001	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2170	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2002	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2171	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2003	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2172	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2004	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2173	1-216-025-00	METAL GLAZE	100 5% 1/10W
R2006	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R2174	1-216-033-00	METAL GLAZE	220 5% 1/10W
R2008	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2175	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R2009	1-216-093-00	METAL GLAZE	68K 5% 1/10W	R2177	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2010	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R2178	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2011	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R2179	1-216-109-00	METAL GLAZE	330K 5% 1/10W
R2012	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R2180	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R2013	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2181	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R2108	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R2182	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2109	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R2183	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2110	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R2184	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R2111	1-216-657-11	METAL CHIP	1.8K 0.50% 1/10W	R2185	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R2112	1-216-657-11	METAL CHIP	1.8K 0.50% 1/10W	R2186	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R2113	1-215-425-00	METAL	1.5K 1% 1/4W	R2187	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2114	1-249-418-11	CARBON	1.2K 5% 1/4W	R2188	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R2115	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R2189	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R2116	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R2190	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R2117	1-216-655-11	METAL CHIP	1.5K 0.50% 1/10W	R2191	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R2118	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R2192	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2119	1-216-033-00	METAL GLAZE	220 5% 1/10W	R2193	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R2120	1-216-748-11	METAL GLAZE	39K 5% 1/10W	R2194	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2121	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R2195	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R2122	1-216-656-11	METAL CHIP	1.6K 0.50% 1/10W	R2196	1-216-294-00	METAL GLAZE	10W 5% 1/8W
R2123	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R2197	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R2124	1-215-434-00	METAL	3.6K 1% 1/4W	R2198	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R2125	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R2199	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R2126	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R2200	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2127	1-216-655-11	METAL CHIP	1.5K 0.50% 1/10W	R2201	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2128	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R2202	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2129	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R2203	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2130	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R2204	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2131	1-216-105-00	METAL GLAZE	220K 5% 1/10W	R2205	1-216-295-00	METAL GLAZE	0 5% 1/10W
R2132	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R2207	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R2133	1-216-037-00	METAL GLAZE	330 5% 1/10W	R2208	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2134	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2209	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R2135	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R2210	1-216-039-00	METAL GLAZE	390 5% 1/10W
R2136	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2211	1-216-033-00	METAL GLAZE	220 5% 1/10W
R2137	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R2212	1-216-033-00	METAL GLAZE	220 5% 1/10W
R2139	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R2213	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R2140	1-216-093-00	METAL GLAZE	68K 5% 1/10W	R2214	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2141	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2215	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2142	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R2216	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2143	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R2217	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2144	1-216-041-00	METAL GLAZE	470 5% 1/10W	R2218	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2145	1-249-377-11	CARBON	0.47 5% 1/4W F	R2219	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2146	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R2220	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R2147	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R2221	1-216-039-00	METAL GLAZE	390 5% 1/10W
R2148	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R2222	1-216-033-00	METAL GLAZE	220 5% 1/10W
R2149	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2223	1-216-033-00	METAL GLAZE	220 5% 1/10W
R2150	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R2224	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2152	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2225	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2153	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2226	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2154	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R2227	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2157	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R2228	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
				R2229	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R2230	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R2552	1-216-633-11	METAL CHIP 180 0.50% 1/10W	
R2231	1-216-049-00	METAL GLAZE	1K 5% 1/10W			<VARIABLE RESISTOR>	
R2232	1-216-039-00	METAL GLAZE	390 5% 1/10W	RV2103	1-238-013-11	RES, ADJ, CARBON 2.2K	
R2233	1-216-033-00	METAL GLAZE	220 5% 1/10W	RV2105	1-238-013-11	RES, ADJ, CARBON 2.2K	
R2234	1-216-033-00	METAL GLAZE	220 5% 1/10W	RV2106	1-238-017-11	RES, ADJ, CARBON 22K	
				RV2107	1-238-016-11	RES, ADJ, CARBON 10K	
R2236	1-216-049-00	METAL GLAZE	1K 5% 1/10W	RV2108	1-238-012-11	RES, ADJ, CARBON 1K	
R2237	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R2238	1-216-037-00	METAL GLAZE	330 5% 1/10W	RV2200	1-238-023-11	RES, ADJ, CARBON 470K	
R2239	1-216-037-00	METAL GLAZE	330 5% 1/10W	RV2201	1-238-023-11	RES, ADJ, CARBON 470K	
R2240	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W			<CRYSTAL>	
				X2101	1-567-505-11	OSCILLATOR, CRYSTAL	
R2241	1-216-049-00	METAL GLAZE	1K 5% 1/10W	X2102	1-577-706-11	VIBRATOR, CERAMIC	
R2242	1-216-049-00	METAL GLAZE	1K 5% 1/10W			*****	
R2243	1-216-049-00	METAL GLAZE	1K 5% 1/10W	*A-1296-697-A		A BOARD, COMPLETE	
R2244	1-216-049-00	METAL GLAZE	1K 5% 1/10W			*****	
R2245	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
				*4-393-401-01		SPRING	
R2246	1-216-049-00	METAL GLAZE	1K 5% 1/10W	*4-341-751-01		EYELET (EY6,EY9,EY13,EY14,EY17,EY19, EY20,EY22,EY25,EY26,EY28~EY31,EY52~EY54, EY59)	
R2247	1-216-049-00	METAL GLAZE	1K 5% 1/10W	*4-341-752-01		EYELET (EY1~EY5,EY8,EY10~EY12,EY15,EY16, EY23,EY24,EY27,EY32~EY35,EY44~EY48,EY56, EY57,EY60~EY63)	
R2248	1-216-049-00	METAL GLAZE	1K 5% 1/10W			<CONNECTOR>	
R2249	1-216-049-00	METAL GLAZE	1K 5% 1/10W	A11	*1-564-513-11	PLUG, CONNECTOR 10P	
R2250	1-216-049-00	METAL GLAZE	1K 5% 1/10W	A12	*1-564-510-11	PLUG, CONNECTOR 7P	
				A22	*1-565-509-11	CONNECTOR, BOARD TO BOARD 18P	
R2251	1-216-049-00	METAL GLAZE	1K 5% 1/10W	A23	*1-565-509-11	CONNECTOR, BOARD TO BOARD 18P	
R2252	1-216-025-00	METAL GLAZE	100 5% 1/10W	A24	*1-564-508-11	PLUG, CONNECTOR 5P	
R2253	1-216-025-00	METAL GLAZE	100 5% 1/10W				
R2254	1-216-025-00	METAL GLAZE	100 5% 1/10W	A31	*1-564-515-11	PLUG, CONNECTOR 12P	
R2256	1-216-049-00	METAL GLAZE	1K 5% 1/10W	A32	*1-564-510-11	PLUG, CONNECTOR 7P	
				A51	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)	
R2257	1-216-049-00	METAL GLAZE	1K 5% 1/10W	A52	*1-568-536-11	PLUG (MINIATURE DY) 6P	
R2258	1-216-049-00	METAL GLAZE	1K 5% 1/10W	A53	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
R2259	1-216-039-00	METAL GLAZE	390 5% 1/10W				
R2260	1-216-031-00	METAL GLAZE	180 5% 1/10W	A55	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P	
R2261	1-216-073-00	METAL GLAZE	10K 5% 1/10W	A56	*1-559-991-21	CONNECTOR ASSY 1P	
				A61	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
R2262	1-216-073-00	METAL GLAZE	10K 5% 1/10W	A63	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P	
R2501	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	A64	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
R2502	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W				
R2503	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	A65	*1-564-507-11	PLUG, CONNECTOR 4P	
R2504	1-216-073-00	METAL GLAZE	10K 5% 1/10W	A75	*1-580-843-11	PIN, CONNECTOR (POWER)	
						<CAPACITOR>	
R2505	1-216-037-00	METAL GLAZE	330 5% 1/10W	C101	1-124-907-11	ELECT 10MF 20% 50 V	
R2506	1-216-095-00	METAL GLAZE	82K 5% 1/10W	C102	1-126-233-11	ELECT 22MF 20% 25 V	
R2507	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	C103	1-124-360-00	ELECT 1000MF 20% 16 V	
R2508	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	C104	1-126-176-11	ELECT 220MF 20% 10 V	
R2509	1-216-025-00	METAL GLAZE	100 5% 1/10W	C105	1-126-101-11	ELECT 100MF 20% 16 V	
R2510	1-216-123-11	METAL GLAZE	1.2M 5% 1/10W	C106	1-102-121-00	CERAMIC 0.0022MF 10% 50 V	
R2511	1-216-121-00	METAL GLAZE	1M 5% 1/10W	C107	1-102-121-00	CERAMIC 0.0022MF 10% 50 V	
R2512	1-216-101-00	METAL GLAZE	150K 5% 1/10W	C108	1-102-129-00	CERAMIC 0.01MF 10% 50 V	
R2513	1-216-033-00	METAL GLAZE	220 5% 1/10W	C110	1-162-215-31	CERAMIC 47PF 5% 50 V	
R2514	1-216-029-00	METAL GLAZE	150 5% 1/10W	C112	1-124-925-11	ELECT 2.2MF 20% 50 V	
R2515	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C113	1-102-121-00	CERAMIC 0.0022MF 10% 50 V	
R2516	1-216-037-00	METAL GLAZE	330 5% 1/10W	C114	1-124-907-11	ELECT 10MF 20% 50 V	
R2517	1-216-075-00	METAL GLAZE	12K 5% 1/10W	C116	1-102-973-00	CERAMIC 100PF 5% 50 V	
R2519	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R2520	1-216-295-00	METAL GLAZE	0 5% 1/10W				
R2521	1-216-295-00	METAL GLAZE	0 5% 1/10W				
R2522	1-216-295-00	METAL GLAZE	0 5% 1/10W				
R2523	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W				
R2524	1-216-033-00	METAL GLAZE	220 5% 1/10W				
R2525	1-216-033-00	METAL GLAZE	220 5% 1/10W				
R2526	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R2527	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R2528	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R2535	1-215-857-11	METAL OXIDE	10 5% 1W F				
R2540	1-216-077-00	METAL GLAZE	15K 5% 1/10W				
R2541	1-216-077-00	METAL GLAZE	15K 5% 1/10W				
R2542	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R2550	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R2551	1-216-295-00	METAL GLAZE	0 5% 1/10W				

A

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C118	1-102-973-00	CERAMIC	100PF 5% 50V	C315	1-136-157-00	FILM	0.022MF 5% 50V
C119	1-130-728-00	FILM	0.0022MF 5% 50V	C316	1-124-902-00	ELECT	0.47MF 20% 50V
C120	1-119-160-00	ELECT	470MF 10V	C317	1-124-360-00	ELECT	1000MF 20% 16V
C121	1-102-976-00	CERAMIC	180PF 5% 50V	C318	1-130-471-00	MYLAR	0.001MF 5% 50V
C122	1-102-973-00	CERAMIC	100PF 5% 50V	C319	1-124-903-11	ELECT	1MF 20% 50V
C123	1-124-477-11	ELECT	47MF 20% 16V	C320	1-130-479-00	MYLAR	0.0047MF 5% 50V
C124	1-136-161-00	FILM	0.047MF 5% 50V	C321	1-102-114-00	CERAMIC	470PF 10% 50V
C125	1-162-286-31	CERAMIC	220PF 10% 50V	C322	1-102-114-00	CERAMIC	470PF 10% 50V
C126	1-124-903-11	ELECT	1MF 20% 50V	C324	1-124-903-11	ELECT	1MF 20% 50V
C127	1-102-978-00	CERAMIC	220PF 5% 50V	C325	1-136-153-00	FILM	0.01MF 5% 50V
C128	1-102-129-00	CERAMIC	0.01MF 10% 50V	C326	1-124-903-11	ELECT	1MF 20% 50V
C129	1-101-006-00	CERAMIC	0.047MF 50V	C327	1-162-117-00	CERAMIC	100PF 10% 500V
C130	1-101-005-00	CERAMIC	0.022MF 50V	C328	1-124-902-00	ELECT	0.47MF 20% 50V
C131	1-101-005-00	CERAMIC	0.022MF 50V	C329	1-124-477-11	ELECT	47MF 20% 16V
C132	1-102-129-00	CERAMIC	0.01MF 10% 50V	C330	1-102-116-00	CERAMIC	680PF 10% 50V
C134	1-136-165-00	FILM	0.1MF 5% 50V	C332	1-136-169-00	FILM	0.22MF 5% 50V
C135	1-136-173-00	FILM	0.47MF 5% 50V	C333	1-136-169-00	FILM	0.22MF 5% 50V
C136	1-124-477-11	ELECT	47MF 20% 25V	C334	1-136-157-00	FILM	0.022MF 5% 50V
C241	1-124-907-11	ELECT	10MF 20% 50V	C335	1-124-903-11	ELECT	1MF 20% 50V
C251	1-124-903-11	ELECT	1MF 20% 50V	C336	1-124-907-11	ELECT	10MF 20% 50V
C252	1-136-157-00	FILM	0.022MF 5% 50V	C337	1-124-798-11	ELECT	1MF 20% 160V
C253	1-124-903-11	ELECT	1MF 20% 50V	C338	1-136-153-00	FILM	0.01MF 5% 50V
C254	1-130-309-00	FILM	0.033MF 5% 100V	C339	1-124-907-11	ELECT	10MF 20% 50V
C255	1-124-903-11	ELECT	1MF 20% 50V	C341	1-124-902-00	ELECT	0.47MF 20% 50V
C256	1-124-478-11	ELECT	100MF 20% 25V	C342	1-101-005-00	CERAMIC	0.022MF 50V
C257	1-124-927-11	ELECT	4.7MF 20% 50V	C343	1-124-477-11	ELECT	47MF 20% 16V
C258	1-124-902-00	ELECT	0.47MF 20% 50V	C344	1-124-120-11	ELECT	220MF 20% 16V
C259	1-124-903-11	ELECT	1MF 20% 50V	C345	1-124-925-11	ELECT	2.2MF 20% 50V
C261	1-131-347-00	TANTALUM	1MF 20% 16V	C346	1-124-925-11	ELECT	2.2MF 20% 50V
C262	1-124-903-11	ELECT	1MF 20% 50V	C347	1-126-103-11	ELECT	470MF 20% 16V
C263	1-124-903-11	ELECT	1MF 20% 50V	C351	1-101-888-00	CERAMIC	68PF 5% 50V
C264	1-124-907-11	ELECT	10MF 20% 50V	C352	1-102-114-00	CERAMIC	470PF 10% 50V
C265	1-136-170-00	FILM	0.27MF 5% 50V	C354	1-126-101-11	ELECT	100MF 20% 16V
C266	1-126-320-11	ELECT	10MF 20% 16V	C500	1-130-475-00	MYLAR	0.0022MF 5% 50V
C267	1-131-368-00	TANTALUM	3.3MF 10% 16V	C501	1-124-902-00	ELECT	0.47MF 20% 50V
C268	1-124-903-11	ELECT	1MF 20% 50V	C502	1-102-244-00	CERAMIC	220PF 10% 500V
C269	1-131-347-00	TANTALUM	1MF 20% 16V	C503	1-102-244-00	CERAMIC	220PF 10% 500V
C270	1-124-903-11	ELECT	1MF 20% 50V	C504	1-106-383-00	MYLAR	0.047MF 200V
C271	1-124-907-11	ELECT	10MF 20% 50V	C505	1-102-030-00	CERAMIC	330PF 10% 500V
C272	1-124-903-11	ELECT	1MF 20% 50V	C506	Δ 1-162-115-91	CERAMIC	330PF 10% 2KV
C273	1-124-477-11	ELECT	47MF 20% 16V	C507	Δ 1-137-024-11	FILM	0.02MF 3% 2KV
C274	1-130-475-00	MYLAR	0.0022MF 5% 50V	C509	Δ 1-136-313-51	FILM	0.047MF 5% 400V
C275	1-130-475-00	MYLAR	0.0022MF 5% 50V	C512	1-124-927-11	ELECT	4.7MF 20% 50V
C276	1-102-074-00	CERAMIC	0.001MF 10% 50V	C513	1-102-228-00	CERAMIC	470PF 10% 500V
C277	1-126-320-11	ELECT	10MF 20% 16V	C516	1-136-113-00	FILM	2MF 5% 200V
C278	1-124-903-11	ELECT	1MF 20% 50V	C517	1-124-634-11	ELECT	1MF 20% 250V
C279	1-124-903-11	ELECT	1MF 20% 50V	C518	1-106-395-00	MYLAR	0.15MF 10% 200V
C281	1-124-907-11	ELECT	10MF 20% 50V	C521	1-136-165-00	FILM	0.1MF 5% 50V
C282	1-124-907-11	ELECT	10MF 20% 50V	C522	1-136-161-00	FILM	0.047MF 5% 50V
C284	1-124-907-11	ELECT	10MF 20% 50V	C523	1-162-318-11	CERAMIC	0.001MF 10% 500V
C301	1-102-973-00	CERAMIC	100PF 5% 50V	C525	1-102-228-00	CERAMIC	470PF 10% 500V
C302	1-124-903-11	ELECT	1MF 20% 50V	C526	1-136-124-00	FILM	0.56MF 5% 400V
C303	1-136-153-00	FILM	0.01MF 5% 50V	C527	1-162-116-00	CERAMIC	680PF 10% 2KV
C304	1-124-234-00	ELECT	22MF 20% 16V	C528	1-162-116-00	CERAMIC	680PF 10% 2KV
C305	1-124-903-11	ELECT	1MF 20% 50V	C529	1-106-359-00	MYLAR	0.0047MF 10% 200V
C306	1-101-006-00	CERAMIC	0.047MF 50V	C536	1-124-907-11	ELECT	10MF 20% 50V
C307	1-102-978-00	CERAMIC	220PF 5% 50V	C538	1-124-927-11	ELECT	4.7MF 20% 50V
C308	1-124-902-00	ELECT	0.47MF 20% 50V	C539	1-124-477-11	ELECT	47MF 20% 25V
C309	1-102-965-00	CERAMIC	39PF 5% 50V	C540	1-124-911-11	ELECT	220MF 20% 50V
C310	1-124-234-00	ELECT	22MF 20% 16V	C541	1-136-165-00	FILM	0.1MF 5% 50V
C311	1-136-165-00	FILM	0.1MF 5% 50V	C542	1-136-161-00	FILM	0.047MF 5% 50V
C312	1-136-165-00	FILM	0.1MF 5% 50V	C545	1-123-932-00	ELECT	4.7MF 20% 160V
C313	1-136-165-00	FILM	0.1MF 5% 50V	C546	1-106-216-00	MYLAR	0.068MF 10% 100V
C314	1-136-169-00	FILM	0.22MF 5% 50V				

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A

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C547	1-124-557-11	ELECT	1000MF 20% 25V	D302	8-719-109-89	DIODE RD5.6ES-B2	
C548	1-162-114-00	CERAMIC	0.0047MF 2KV	D303	8-719-911-19	DIODE 1SS119	
C549	1-123-947-00	ELECT	10MF 20% 250V	D304	8-719-110-13	DIODE RD9.1ES-B2	
C551 Δ	1-108-433-91	MYLAR	0.1MF 10% 200V	D305	8-719-110-48	DIODE RD18ES-B1	
C552	1-123-024-21	ELECT	33MF 160V	D306	8-719-911-19	DIODE 1SS119	
C553	1-124-557-11	ELECT	1000MF 20% 25V	D307	8-719-911-19	DIODE 1SS119	
C554	1-102-228-00	CERAMIC	470PF 10% 500V	D308	8-719-110-49	DIODE RD18ES-B2	
C555	1-124-477-11	ELECT	47MF 20% 25V	D310	8-719-109-93	DIODE RD6.2ES-B2	
C556	1-102-228-00	CERAMIC	470PF 10% 500V	D311	8-719-109-93	DIODE RD6.2ES-B2	
C557	1-106-387-00	MYLAR	0.068MF 10% 200V	D500	8-719-911-55	DIODE U05G	
C558	1-136-161-00	FILM	0.047MF 5% 50V	D501	8-719-312-71	DIODE RS3FS	
C561	1-124-910-11	ELECT	47MF 20% 50V	D502	8-719-911-55	DIODE U05G	
C562	1-124-902-00	ELECT	0.47MF 20% 50V	D503	8-719-312-72	DIODE RU30A	
C563	1-124-902-00	ELECT	0.47MF 20% 50V	D504	8-719-911-55	DIODE U05G	
C565	1-124-903-11	ELECT	1MF 20% 50V	D505	8-719-911-55	DIODE U05G	
C573	1-130-479-00	MYLAR	0.0047MF 5% 50V	D506	8-719-312-71	DIODE RS3FS	
C601 Δ	1-136-311-51	FILM	0.47MF 20% 125V	D507	8-719-109-93	DIODE RD6.2ES-B2	
C603 Δ	1-162-576-51	CERAMIC	0.001MF 10% 400V	D509	8-719-911-19	DIODE 1SS119	
C604 Δ	1-136-311-51	FILM	0.47MF 20% 125V	D510	8-719-911-55	DIODE U05G	
C605 Δ	1-161-953-92	CERAMIC	0.0047MF 20% 400V	D514	8-719-911-19	DIODE 1SS119	
C606 Δ	1-161-953-92	CERAMIC	0.0047MF 20% 400V	D515	8-719-911-19	DIODE 1SS119	
C607	1-125-538-11	ELECT (BLOCK)	1000MF 20% 200V	D517	8-719-976-64	DIODE RGP02-17	
C608	1-102-125-00	CERAMIC	0.0047MF 10% 50V	D519	8-719-300-33	DIODE RU-3AM	
C609	1-102-125-00	CERAMIC	0.0047MF 10% 50V	D520	8-719-979-85	DIODE EGP20G	
C610	1-124-480-11	ELECT	470MF 20% 25V	D521	8-719-979-85	DIODE RGP20G	
C611	1-124-480-11	ELECT	470MF 20% 25V	D531	8-719-302-43	DIODE EL1Z	
C612	1-124-477-11	ELECT	47MF 20% 16V	D540	8-719-110-61	DIODE RD24ES-B1	
C613	1-124-478-11	ELECT	100MF 20% 25V	D563	8-719-911-19	DIODE 1SS119	
C614	1-124-907-11	ELECT	10MF 20% 50V	D601 Δ	8-719-305-07	DIODE RBV-406H	
C620	1-124-478-11	ELECT	100MF 20% 25V	D602	8-719-511-40	DIODE S1VB40	
C621	1-126-101-11	ELECT	100MF 20% 16V	D603	8-719-911-55	DIODE U05G	
C622	1-126-101-11	ELECT	100MF 20% 16V	D604	8-719-911-19	DIODE 1SS119	
C623	1-126-101-11	ELECT	100MF 20% 16V	D606	8-719-110-78	DIODE RD33ES-B2	
C625	1-124-907-11	ELECT	10MF 20% 50V				
C626	1-136-165-00	FILM	0.1MF 5% 50V				
C627	1-124-477-11	ELECT	47MF 20% 16V				
<COMPOSITION CIRCUIT BLOCK>				<FUSE>			
CP101	1-236-294-11	NETWORK, RES		F601 Δ	1-532-748-11	FUSE, GLASS TUBE 6.3A/125V	
CP102	1-236-491-11	NETWORK, RES, THICK FILM			1-533-223-11	CLIP, FUSE; F601	
CP103	1-236-358-21	NETWORK, RES					
CP104	1-236-479-11	NETWORK, C					
CP106	1-236-301-11	NETWORK, C					
CP107	1-236-491-11	NETWORK, RES, THICK FILM					
CP108	1-236-301-11	NETWORK, C					
CP109	1-236-776-11	NETWORK, RES					
CP110	1-232-680-11	COMPOSITION CIRCUIT BLOCK					
CP301	1-236-730-11	NETWORK, C					
<DIODE>							
D103	8-719-974-81	DIODE 1SV113					
D104	8-719-911-19	DIODE 1SS119					
D105	8-719-911-19	DIODE 1SS119					
D106	8-719-911-19	DIODE 1SS119					
D107	8-719-911-19	DIODE 1SS119					
D108	8-719-911-19	DIODE 1SS119					
D109	8-719-911-19	DIODE 1SS119					
D250	8-719-109-93	DIODE RD6.2ES-B2					
D251	8-719-109-93	DIODE RD6.2ES-B2					
D252	8-719-110-31	DIODE RD12ES-B2					
D300	8-719-911-19	DIODE 1SS119					
D301	8-719-109-89	DIODE RD5.6ES-B2					
<IC>							
IC101	8-759-635-34	IC M37100M8-115SP					
IC102	8-759-972-43	IC PC08582					
IC103	8-759-403-44	IC MN1280-S					
IC104	8-759-978-66	IC MB88201-638L					
IC251	8-752-037-24	IC CXA1264AS					
IC301	8-752-035-52	IC CXA1313S					
IC500	8-759-980-58	IC TDA8172					
IC531	8-759-945-58	IC RC4558P					
IC601	8-759-112-06	IC UPC78N05H					
IC603 Δ	8-759-142-04	IC UPC7893HF					
IC604 Δ	8-759-112-06	IC UPC78N05H					
<IF BLOCK>							
IF201	1-464-755-21	IF BLOCK (1FE-450A)					
<COIL>							
L101	1-410-470-11	INDUCTOR 10UH					
L102	1-408-408-00	INDUCTOR 8.2UH					
L103	1-410-669-31	INDUCTOR 33UH					
L104	1-408-413-00	INDUCTOR 22UH					
L301	1-408-409-00	INDUCTOR 10UH					

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L501	1-422-613-11	COIL, AIR CORE		R106	1-249-425-11	CARBON 4.7K 5% 1/4W	
L503	1-422-613-11	COIL, AIR CORE		R107	1-249-441-11	CARBON 100K 5% 1/4W	
L505	1-408-237-00	INDUCTOR 3.3MMH		R108	1-249-437-11	CARBON 47K 5% 1/4W	
L506	1-459-104-00	COIL, DUST CORE		R109	1-249-429-11	CARBON 10K 5% 1/4W	
L509	1-410-669-31	INDUCTOR 33UH		R110	1-247-903-00	CARBON 1M 5% 1/4W	
L510	A 1-408-698-21	INDUCTOR 8.2UH		R113	1-249-417-11	CARBON 1K 5% 1/4W	
L511	1-408-225-00	INDUCTOR 3.3UH		R114	1-249-435-11	CARBON 33K 5% 1/4W	
L512	1-408-225-00	INDUCTOR 3.3UH		R115	1-249-435-11	CARBON 33K 5% 1/4W	
L513	1-408-698-00	INDUCTOR 8.2UH		R116	1-249-411-11	CARBON 330 5% 1/4W	
L514	1-408-698-00	INDUCTOR 8.2UH		R119	1-249-437-11	CARBON 47K 5% 1/4W	
L515	A 1-459-224-13	HLC		R120	1-249-417-11	CARBON 1K 5% 1/4W	
L517	1-459-075-00	COIL, DYNAMIC CONVERSION CHOKE		R121	1-249-421-11	CARBON 2.2K 5% 1/4W	
<MODULE>				R122	1-249-421-11	CARBON 2.2K 5% 1/4W	
PM501	A 1-808-968-11	MODULE, PROTECTOR (PM-20)		R123	1-249-421-11	CARBON 2.2K 5% 1/4W	
<TRANSISTOR>				R124	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q101	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R125	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q102	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R126	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q103	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R127	1-247-887-00	CARBON 220K 5% 1/4W	
Q105	8-729-119-76	TRANSISTOR 2SA1175-HFE		R128	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q106	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R129	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q107	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R130	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q108	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R131	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q130	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R132	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q202	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R133	1-249-409-11	CARBON 220 5% 1/4W	
Q203	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R134	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q301	8-729-119-76	TRANSISTOR 2SA1175-HFE		R135	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q302	8-729-119-76	TRANSISTOR 2SA1175-HFE		R136	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q303	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R137	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q304	8-729-119-76	TRANSISTOR 2SA1175-HFE		R138	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q305	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R139	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q306	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R140	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q307	8-729-967-32	TRANSISTOR 2SC2673-Q		R141	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q308	8-729-993-72	TRANSISTOR 2SA937-Q		R142	1-249-429-11	CARBON 10K 5% 1/4W	
Q309	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R143	1-249-413-11	CARBON 470 5% 1/4W	
Q310	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R144	1-249-429-11	CARBON 10K 5% 1/4W	
Q311	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R145	1-249-422-11	CARBON 2.7K 5% 1/4W	
Q312	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R146	1-249-422-11	CARBON 2.7K 5% 1/4W	
Q313	8-729-119-76	TRANSISTOR 2SA1175-HFE		R147	1-249-422-11	CARBON 2.7K 5% 1/4W	
Q314	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R148	1-249-437-11	CARBON 47K 5% 1/4W	
Q315	8-729-119-76	TRANSISTOR 2SA1175-HFE		R149	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q316	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R150	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q317	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R151	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q318	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R152	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q501	8-729-119-80	TRANSISTOR 2SC2688-LK		R153	1-249-424-11	CARBON 3.9K 5% 1/4W	
Q502	8-729-822-65	TRANSISTOR 2SD1886CA		R154	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q504	8-729-119-76	TRANSISTOR 2SA1175-HFE		R155	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q505	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R156	1-249-417-11	CARBON 1K 5% 1/4W	
Q530	8-729-202-03	TRANSISTOR 2SD1408-Y		R157	1-249-417-11	CARBON 1K 5% 1/4W	
Q601	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R158	1-249-417-11	CARBON 1K 5% 1/4W	
Q607	8-729-423-37	TRANSISTOR 2SC3311A-QRS		R159	1-249-417-11	CARBON 1K 5% 1/4W	
Q608	8-729-119-76	TRANSISTOR 2SA1175-HFE		R161	1-215-892-11	METAL OXIDE 1K 5% 2W F	
<RESISTOR>				R162	1-249-401-11	CARBON 47 5% 1/4W	
R101	1-249-417-11	CARBON 1K 5% 1/4W		R163	1-249-410-11	CARBON 270 5% 1/4W	
R102	1-249-425-11	CARBON 4.7K 5% 1/4W		R164	1-249-421-11	CARBON 2.2K 5% 1/4W	
R103	1-249-409-11	CARBON 220 5% 1/4W		R165	1-249-437-11	CARBON 47K 5% 1/4W	
R104	1-249-409-11	CARBON 220 5% 1/4W		R166	1-249-421-11	CARBON 2.2K 5% 1/4W	
R105	1-249-409-11	CARBON 220 5% 1/4W		R167	1-249-421-11	CARBON 2.2K 5% 1/4W	
				R168	1-249-421-11	CARBON 2.2K 5% 1/4W	
				R169	1-249-409-11	CARBON 220 5% 1/4W	
				R170	1-249-409-11	CARBON 220 5% 1/4W	
				R171	1-249-421-11	CARBON 2.2K 5% 1/4W	
				R172	1-249-409-11	CARBON 220 5% 1/4W	
				R173	1-249-429-11	CARBON 10K 5% 1/4W	
				R174	1-249-409-11	CARBON 220 5% 1/4W	

A


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R175	1-249-409-11	CARBON	220 5% 1/4W	R321	1-249-405-11	CARBON	100 5% 1/4W
R176	1-249-429-11	CARBON	10K 5% 1/4W	R322	1-249-405-11	CARBON	100 5% 1/4W
R177	1-249-429-11	CARBON	10K 5% 1/4W	R323	1-249-441-11	CARBON	100K 5% 1/4W
R178	1-249-429-11	CARBON	10K 5% 1/4W	R324	1-249-405-11	CARBON	100 5% 1/4W
R179	1-249-425-11	CARBON	4.7K 5% 1/4W	R325	1-249-441-11	CARBON	100K 5% 1/4W
R180	1-249-421-11	CARBON	2.2K 5% 1/4W	R326	1-249-405-11	CARBON	100 5% 1/4W
R181	1-249-421-11	CARBON	2.2K 5% 1/4W	R327	1-249-441-11	CARBON	100K 5% 1/4W
R182	1-249-421-11	CARBON	2.2K 5% 1/4W	R328	1-249-405-11	CARBON	100 5% 1/4W
R183	1-249-421-11	CARBON	2.2K 5% 1/4W	R329	1-249-433-11	CARBON	22K 5% 1/4W
R184	1-249-421-11	CARBON	2.2K 5% 1/4W	R330	1-249-433-11	CARBON	22K 5% 1/4W
R185	1-249-421-11	CARBON	2.2K 5% 1/4W	R331	1-249-433-11	CARBON	22K 5% 1/4W
R186	1-249-421-11	CARBON	2.2K 5% 1/4W	R332	1-249-436-11	CARBON	39K 5% 1/4W
R187	1-249-417-11	CARBON	1K 5% 1/4W	R333	1-249-433-11	CARBON	22K 5% 1/4W
R188	1-249-417-11	CARBON	1K 5% 1/4W	R334	1-249-433-11	CARBON	22K 5% 1/4W
R189	1-249-417-11	CARBON	1K 5% 1/4W	R335	1-249-418-11	CARBON	1.2K 5% 1/4W
R190	1-249-417-11	CARBON	1K 5% 1/4W	R336	1-247-903-00	CARBON	1M 5% 1/4W
R191	1-249-421-11	CARBON	2.2K 5% 1/4W	R337	1-249-405-11	CARBON	100 5% 1/4W
R192	1-249-421-11	CARBON	2.2K 5% 1/4W	R338	1-249-417-11	CARBON	1K 5% 1/4W
R193	1-249-429-11	CARBON	10K 5% 1/4W	R339	1-249-415-11	CARBON	680 5% 1/4W
R194	1-249-429-11	CARBON	10K 5% 1/4W	R341	1-215-457-00	METAL	33K 1% 1/4W
R195	1-249-437-11	CARBON	47K 5% 1/4W	R343	1-249-428-11	CARBON	8.2K 5% 1/4W
R197	1-247-903-00	CARBON	1M 5% 1/4W	R344	1-249-441-11	CARBON	100K 5% 1/4W
R198	1-249-425-11	CARBON	4.7K 5% 1/4W	R345	1-249-429-11	CARBON	10K 5% 1/4W
R251	1-249-409-11	CARBON	220 5% 1/4W	R346	1-249-421-11	CARBON	2.2K 5% 1/4W
R252	1-249-409-11	CARBON	220 5% 1/4W	R347	1-249-405-11	CARBON	100 5% 1/4W
R253	1-249-409-11	CARBON	220 5% 1/4W	R348	1-249-411-11	CARBON	330 5% 1/4W
R254	1-249-409-11	CARBON	220 5% 1/4W	R349	1-259-883-11	CARBON	3.9M 5% 1/4W
R255	1-249-420-11	CARBON	1.8K 5% 1/4W	R350	1-249-438-11	CARBON	56K 5% 1/4W
R256	1-249-405-11	CARBON	100 5% 1/4W	R351	1-249-433-11	CARBON	22K 5% 1/4W
R257	1-249-409-11	CARBON	220 5% 1/4W	R352	1-249-430-11	CARBON	12K 5% 1/4W
R258	1-249-409-11	CARBON	220 5% 1/4W	R353	1-249-441-11	CARBON	100K 5% 1/4W
R259	1-249-409-11	CARBON	220 5% 1/4W	R354	1-247-883-00	CARBON	150K 5% 1/4W
R260	1-249-409-11	CARBON	220 5% 1/4W	R356	1-249-417-11	CARBON	1K 5% 1/4W
R261	1-249-441-11	CARBON	100K 5% 1/4W	R357	1-249-437-11	CARBON	47K 5% 1/4W
R262	1-249-441-11	CARBON	100K 5% 1/4W	R358	1-249-437-11	CARBON	47K 5% 1/4W
R263	1-249-429-11	CARBON	10K 5% 1/4W	R359	1-249-405-11	CARBON	100 5% 1/4W
R264	1-249-441-11	CARBON	100K 5% 1/4W	R360	1-249-413-11	CARBON	470 5% 1/4W
R265	1-249-441-11	CARBON	100K 5% 1/4W	R361	1-249-419-11	CARBON	1.5K 5% 1/4W
R266	1-215-456-00	METAL	30K 1% 1/4W	R362	1-249-409-11	CARBON	220 5% 1/4W
R267	1-249-429-11	CARBON	10K 5% 1/4W	R363	1-249-409-11	CARBON	220 5% 1/4W
R268	1-215-865-11	METAL OXIDE	220 5% 1W F	R364	1-249-409-11	CARBON	220 5% 1/4W
R269	1-249-431-11	CARBON	15K 5% 1/4W	R365	1-249-417-11	CARBON	1K 5% 1/4W
R270	1-249-431-11	CARBON	15K 5% 1/4W	R366	1-249-417-11	CARBON	1K 5% 1/4W
R300	1-249-417-11	CARBON	1K 5% 1/4W	R367	1-247-891-00	CARBON	330K 5% 1/4W
R301	1-249-425-11	CARBON	4.7K 5% 1/4W	R368	1-249-417-11	CARBON	1K 5% 1/4W
R302	1-249-421-11	CARBON	2.2K 5% 1/4W	R370	1-249-405-11	CARBON	100 5% 1/4W
R303	1-249-413-11	CARBON	470 5% 1/4W	R371	1-249-405-11	CARBON	100 5% 1/4W
R304	1-259-883-11	CARBON	3.9M 5% 1/4W	R372	1-249-433-11	CARBON	22K 5% 1/4W
R305	1-249-423-11	CARBON	3.3K 5% 1/4W	R373	1-249-437-11	CARBON	47K 5% 1/4W
R306	1-249-429-11	CARBON	10K 5% 1/4W	R374	1-249-429-11	CARBON	10K 5% 1/4W
R307	1-249-423-11	CARBON	3.3K 5% 1/4W	R375	1-249-418-11	CARBON	1.2K 5% 1/4W
R308	1-249-433-11	CARBON	22K 5% 1/4W	R376	1-249-417-11	CARBON	1K 5% 1/4W
R309	1-249-421-11	CARBON	2.2K 5% 1/4W	R377	1-249-416-11	CARBON	820 5% 1/4W
R310	1-249-417-11	CARBON	1K 5% 1/4W	R378	1-249-409-11	CARBON	220 5% 1/4W
R311	1-215-448-00	METAL	13K 1% 1/4W	R379	1-249-425-11	CARBON	4.7K 5% 1/4W
R312	1-249-432-11	CARBON	18K 5% 1/4W	R380	1-249-420-11	CARBON	1.8K 5% 1/4W
R313	1-215-421-00	METAL	1K 1% 1/4W	R381	1-249-417-11	CARBON	1K 5% 1/4W
R314	1-247-899-11	CARBON	680K 5% 1/4W	R382	1-249-417-11	CARBON	1K 5% 1/4W
R315	1-249-405-11	CARBON	100 5% 1/4W	R383	1-249-421-11	CARBON	2.2K 5% 1/4W
R316	1-249-405-11	CARBON	100 5% 1/4W	R384	1-249-410-11	CARBON	270 5% 1/4W
R317	1-249-405-11	CARBON	100 5% 1/4W	R385	1-249-433-11	CARBON	22K 5% 1/4W
R318	1-249-405-11	CARBON	100 5% 1/4W	R386	1-249-412-11	CARBON	390 5% 1/4W
R319	1-249-405-11	CARBON	100 5% 1/4W	R387	1-249-415-11	CARBON	680 5% 1/4W
R320	1-249-405-11	CARBON	100 5% 1/4W				

G

The components identified by shading and mark are critical for safety.
Replace only with part number specified.

- The components identified by  in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.

Should replacement be required, replace only with the value originally used.

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

KV-27EXR20/27EXR25
RM-Y103 RM-Y104

G

C

REF. NO.	PART NO.	DESCRIPTION	REMARK
C618	1-124-902-00	ELECT	0.47MF 20% 50V
C619	1-124-034-51	ELECT	33MF 20% 16V
C650	1-124-562-11	ELECT	47MF 20% 200V
C652	1-102-244-00	CERAMIC	220PF 10% 500V
C653	1-124-122-11	ELECT	100MF 20% 50V
C654	1-124-478-11	ELECT	100MF 20% 25V
C655	1-124-910-11	ELECT	47MF 20% 50V
C656	1-136-601-11	FILM	0.01MF 10% 630V
C657	1-162-114-00	CERAMIC	0.0047MF 2KV
C658	1-106-383-00	MYLAR	0.047MF 10% 100V
C659	1-162-599-12	CERAMIC	0.0047MF 20% 400V
C660	1-124-925-11	ELECT	2.2MF 20% 100V
C661	1-162-116-00	CERAMIC	680PF 10% 2KV
C663	1-125-512-11	ELECT (BLOCK)	1000MF 20% 160V
C670	1-124-360-00	ELECT	1000MF 20% 16V
C671	1-124-120-11	ELECT	220MF 20% 25V
C673	1-124-478-11	ELECT	100MF 20% 25V
C677	1-124-563-11	ELECT	2200MF 20% 25V
C678	1-102-125-00	CERAMIC	0.0047MF 10% 50V
C679	1-101-821-00	CERAMIC	0.0022MF 500V
<DIODE>			
D605	8-719-911-19	DIODE 1SS119	
D621	8-719-911-19	DIODE 1SS119	
D622	8-719-302-06	DIODE EU2A	
D623	8-719-311-31	DIODE RU-1P	
D624	8-719-301-64	DIODE RU4DS	
D625	8-719-948-59	DIODE ERB93-02	
D626	8-719-941-74	DIODE ERB91-02	
D627	8-719-948-59	DIODE ERB93-02	
<FUSE>			
F602	1-532-743-11	FUSE, GLASS TUBE 2A/125V	
	1-533-223-11	CLIP, FUSE; F602	
<FERRITE BEAD>			
FB601	1-410-396-41	FERRITE BEAD INDUCTOR	
FB602	1-410-397-21	FERRITE BEAD INDUCTOR	
FB603	1-410-397-21	FERRITE BEAD INDUCTOR	
FB604	1-410-396-41	FERRITE BEAD INDUCTOR	
FB607	1-410-397-21	FERRITE BEAD INDUCTOR	
FB608	1-410-397-21	FERRITE BEAD INDUCTOR	
FB609	1-410-397-21	FERRITE BEAD INDUCTOR	
FB610	1-410-397-21	FERRITE BEAD INDUCTOR	
<CONNECTOR>			
G1	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
G24	*1-564-508-11	PLUG, CONNECTOR 5P	
G61	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
G63	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P	
G64	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
<IC>			
IC651	1-8-749-920-57	IC STR-S6301	
IC652	1-8-719-156-73	DIODE PS2501-1LB	
IC653	1-8-749-920-62	IC SE-135NS	
<COIL>			
L613	1-459-155-00	COIL (WITH CORE) 45UH	

REF.NO.	PART NO.	DESCRIPTION	REMARK
L614	1-459-155-00	COIL (WITH CORE) 45UH	
<TRANSISTOR>			
Q603	8-729-200-17	TRANSISTOR 2SA1091-0	
Q604	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q605	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q611	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
Q612	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
<RESISTOR>			
R606	1-207-645-00	WIREWOUND	0.47 5% 3W F
R610	1-215-417-00	METAL	680 1% 1/4W
R611	1-215-477-00	METAL	220K 1% 1/4W
R612	1-249-441-11	CARBON	100K 5% 1/4W
R613	1-249-429-11	CARBON	10K 5% 1/4W
R614	1-249-429-11	CARBON	10K 5% 1/4W
R615	1-247-895-00	CARBON	470K 5% 1/4W
R616	1-249-425-11	CARBON	4.7K 5% 1/4W
R617	1-249-425-11	CARBON	4.7K 5% 1/4W
R650	1-215-893-11	METAL OXIDE	1.5K 5% 2W F
R651	1-216-458-11	METAL OXIDE	1.8K 5% 2W F
R652	1-216-473-11	METAL OXIDE	56 5% 3W F
R653	1-216-473-11	METAL OXIDE	56 5% 3W F
R654	1-207-612-00	WIREWOUND	0.1 10% 2W F
R655	1-207-616-00	WIREWOUND	0.47 10% 2W F
R656	1-249-414-11	CARBON	560 5% 1/4W F
R657	1-202-843-11	SOLID	270K 10% 1/2W
R658	1-215-903-11	METAL OXIDE	68K 5% 2W F
R659	1-215-903-11	METAL OXIDE	68K 5% 2W F
R660	1-215-903-11	METAL OXIDE	68K 5% 2W F
R661	1-215-903-11	METAL OXIDE	68K 5% 2W F
R663	1-215-881-11	METAL OXIDE	15 5% 2W F
R664	1-216-446-00	METAL OXIDE	18 5% 2W F
R665	1-202-730-00	SOLID	8.2M 10% 1/2W
R666	1-249-413-11	CARBON	470 5% 1/4W F
R667	1-216-444-11	METAL OXIDE	82K 5% 1W F
R668	1-249-429-11	CARBON	10K 5% 1/4W
R669	1-216-341-11	METAL OXIDE	0.22 5% 1W F
R670	1-249-423-11	CARBON	3.3K 5% 1/4W
R671	1-216-341-11	METAL OXIDE	0.22 5% 1W F
R672	1-216-457-00	METAL OXIDE	1.2K 5% 2W F
R673	1-249-389-11	CARBON	4.7 5% 1/4W F
R674	1-249-439-11	CARBON	68K 5% 1/4W F
R675	1-249-406-11	CARBON	120 5% 1/4W F
R676	1-249-415-11	CARBON	680 5% 1/4W
R677	1-249-417-11	CARBON	1K 5% 1/4W
R678	1-249-414-11	CARBON	560 5% 1/4W
R679	1-216-473-11	METAL OXIDE	56 5% 3W F
<TRANSFORMER>			
T651	1-449-953-11	SRT (CONVERTER TRANSFORMER)	
<THERMISTOR>			
THP601	1-808-081-23	THERMISTOR, POSITIVE	

*A-1331-055-A	C BOARD, COMPLETE		

*4-341-751-01	EYELET (EY705,EY709,EY710)		

KV-27EXR20/27EXR25

RM-Y103

RM-Y104

C

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Replace only with part number
specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
	*4-341-752-01	EYELET (EY704,EY706,EY707)		NL701	1-519-154-91	LAMP, NEON	
	*4-379-160-01	COVER (REAR LID), CV					
	*4-379-167-01	COVER (MAIN), CV					
	<CONNECTOR>				<TRANSISTOR>		
C1	1-506-348-99	PIN, CONNECTOR 3P		Q701	8-729-326-11	TRANSISTOR 2SC2611	
C32	*1-564-510-11	PLUG, CONNECTOR 7P		Q702	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C82	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P		Q703	8-729-200-17	TRANSISTOR 2SA1091-0	
	<CAPACITOR>			Q704	8-729-326-11	TRANSISTOR 2SC2611	
C701	1-162-116-00	CERAMIC 680PF 10% 2KV		Q705	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C702	1-136-601-11	FILM 0.01MF 10% 630V		Q706	8-729-200-17	TRANSISTOR 2SA1091-0	
C703	1-124-907-11	ELECT 10MF 20% 50V		Q707	8-729-200-17	TRANSISTOR 2SC2551-0	
C704	1-123-946-00	ELECT 4.7MF 20% 250V		Q708	8-729-326-11	TRANSISTOR 2SC2611	
C705	1-101-821-00	CERAMIC 0.0022MF 500V		Q709	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C707	1-102-116-00	CERAMIC 680PF 10% 50V		Q710	8-729-255-12	TRANSISTOR 2SC2551-0	
C708	1-102-116-00	CERAMIC 680PF 10% 50V		Q711	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C709	1-102-116-00	CERAMIC 680PF 10% 50V		Q712	8-729-255-12	TRANSISTOR 2SC2551-0	
C710	1-102-117-00	CERAMIC 820PF 10% 50V		Q713	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C711	1-126-233-11	ELECT 22MF 20% 25V		Q714	8-729-200-17	TRANSISTOR 2SA1091-0	
C712	1-102-116-00	CERAMIC 680PF 10% 50V		Q715	8-729-200-17	TRANSISTOR 2SA1091-0	
C713	1-102-117-00	CERAMIC 820PF 10% 50V		Q716	8-729-200-17	TRANSISTOR 2SA1091-0	
C714	1-162-622-11	CERAMIC 330PF 10% 6.3KV			<RESISTOR>		
C715	1-102-074-00	CERAMIC 0.001MF 10% 50V		R701	1-216-391-11	METAL OXIDE 1.5 5% 3W F	
C718	1-102-074-00	CERAMIC 0.001MF 10% 50V		R702	1-202-719-00	SOLID 1M 10% 1/2W	
C720	1-126-233-11	ELECT 22MF 20% 25V		R703	1-202-842-11	SOLID 220K 10% 1/2W	
C721	1-102-074-00	CERAMIC 0.001MF 10% 50V		R704	1-202-846-00	SOLID 470K 10% 1/2W	
C730	1-102-116-00	CERAMIC 680PF 10% 50V		R705	1-202-549-00	SOLID 100 10% 1/2W	
C731	1-102-116-00	CERAMIC 680PF 10% 50V		R706	1-202-838-00	SOLID 100K 10% 1/2W	
C732	1-102-116-00	CERAMIC 680PF 10% 50V		R707	1-202-842-11	SOLID 220K 10% 1/2W	
	<DIODE>			R708	1-202-818-00	SOLID 1K 10% 1/2W	
D701	8-719-911-19	DIODE 1SS119		R709	1-202-818-00	SOLID 1K 10% 1/2W	
D702	8-719-911-19	DIODE 1SS119		R710	1-202-818-00	SOLID 1K 10% 1/2W	
D703	8-719-911-19	DIODE 1SS119		R711	1-202-837-00	SOLID 82K 10% 1/2W	
D704	8-719-911-19	DIODE 1SS119		R712	1-202-842-11	SOLID 220K 10% 1/2W	
D705	8-719-911-19	DIODE 1SS119		R713 Δ	1-216-486-51	METAL OXIDE 8.2K 5% 3W F	
D706	8-719-911-19	DIODE 1SS119		R714	1-249-409-11	CARBON 220 5% 1/4W	
D707	8-719-911-19	DIODE 1SS119		R715	1-202-818-00	SOLID 1K 10% 1/2W	
D708	8-719-911-19	DIODE 1SS119		R716 Δ	1-216-486-51	METAL OXIDE 8.2K 5% 3W F	
D709	8-719-911-19	DIODE 1SS119		R717	1-249-409-11	CARBON 220 5% 1/4W	
D710	8-719-901-83	DIODE 1SS83		R718	1-249-409-11	CARBON 220 5% 1/4W	
D711	8-719-901-83	DIODE 1SS83		R720 Δ	1-216-486-51	METAL OXIDE 8.2K 5% 3W F	
D712	8-719-901-83	DIODE 1SS83		R721	1-202-842-11	SOLID 220K 10% 1/2W	
D713	8-719-901-83	DIODE 1SS83		R723	1-249-405-11	CARBON 100 5% 1/4W	
	<JACK>			R724	1-249-405-11	CARBON 100 5% 1/4W	
J701 Δ	1-540-071-13	SOCKET, PICTURE TUBE		R725	1-249-429-11	CARBON 10K 5% 1/4W	
	<COIL>			R726	1-249-407-11	CARBON 150 5% 1/4W	
L701	1-408-417-00	INDUCTOR 47UH		R727	1-249-429-11	CARBON 10K 5% 1/4W	
L702	1-408-421-00	INDUCTOR 100UH		R728	1-249-407-11	CARBON 150 5% 1/4W	
L703	1-408-420-00	INDUCTOR 82UH		R729	1-249-405-11	CARBON 100 5% 1/4W	
L704	1-408-410-00	INDUCTOR 12UH		R730	1-249-407-11	CARBON 150 5% 1/4W	
L705	1-408-411-00	INDUCTOR 15UH		R731	1-247-704-11	CARBON 220 5% 1/4W F	
L706	1-408-421-00	INDUCTOR 100UH		R732	1-247-704-11	CARBON 220 5% 1/4W F	
L707	1-408-411-00	INDUCTOR 15UH		R733	1-247-704-11	CARBON 220 5% 1/4W F	
	<NEON LAMP>			R739	1-249-433-11	CARBON 22K 5% 1/4W	
				R740	1-215-902-11	METAL OXIDE 47K 5% 2W F	
				R741	1-249-417-11	CARBON 1K 5% 1/4W	
				R742	1-249-429-11	CARBON 10K 5% 1/4W F	
				R743	1-249-429-11	CARBON 10K 5% 1/4W F	
				R744	1-247-725-11	CARBON 10K 5% 1/4W F	
				R745	1-247-713-11	CARBON 1K 5% 1/4W F	
				R746	1-215-902-11	METAL OXIDE 47K 5% 1W F	
				R747	1-247-725-11	CARBON 10K 5% 1/4W F	

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C H U2

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R749	1-249-437-11	CARBON	47K 5% 1/4W	C900	1-101-004-00	CERAMIC	0.01MF
R750	1-249-409-11	CARBON	220 5% 1/4W	C901	1-126-233-11	ELECT	22MF 20% 25V
R751	1-249-397-11	CARBON	22 5% 1/4W	C902	1-124-907-11	ELECT	10MF 20% 50V
R752	1-249-397-11	CARBON	22 5% 1/4W	C903	1-124-907-11	ELECT	10MF 20% 50V
R753	1-249-397-11	CARBON	22 5% 1/4W	C904	1-124-907-11	ELECT	10MF 20% 50V
R757	1-249-416-11	CARBON	820 5% 1/4W	C905	1-124-907-11	ELECT	10MF 20% 50V
R777	1-249-441-11	CARBON	100K 5% 1/4W	C906	1-124-907-11	ELECT	10MF 20% 50V
<VARIABLE RESISTOR>				C907	1-124-907-11	ELECT	10MF 20% 50V
RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M		C908	1-126-233-11	ELECT	22MF 20% 25V
RV702	Δ 1-230-619-11	RES, ADJ, METAL GLAZE 110M		C909	1-126-233-11	ELECT	22MF 20% 25V
*****				C910	1-126-233-11	ELECT	22MF 20% 25V
*1-633-485-31	H BOARD	*****		<DIODE>			
*4-334-315-00	CAP, LED			D900	8-719-110-13	DIODE RD9.1ES-B2	
*4-334-322-00	HOLDER (A), LED			D901	8-719-110-13	DIODE RD9.1ES-B2	
*4-374-987-01	GUIDE, LIGHT			D902	8-719-110-13	DIODE RD9.1ES-B2	
*4-381-686-01	BRACKET (B), LIGHT GUIDE			D903	8-719-110-13	DIODE RD9.1ES-B2	
<CAPACITOR>				D904	8-719-110-13	DIODE RD9.1ES-B2	
C52	1-124-477-11	ELECT	47MF 20% 16V	D905	8-719-110-13	DIODE RD9.1ES-B2	
<DIODE>				D906	8-719-110-13	DIODE RD9.1ES-B2	
D1	8-719-311-89	DIODE SEL1222R-C		D907	8-719-110-13	DIODE RD9.1ES-B2	
D2	8-719-311-89	DIODE SEL1222R-C		D908	8-719-110-13	DIODE RD9.1ES-B2	
D51	8-719-911-19	DIODE ISS119		D909	8-719-110-13	DIODE RD9.1ES-B2	
<CONNECTOR>				D910	8-719-110-13	DIODE RD9.1ES-B2	
H11	*1-564-525-11	PLUG, CONNECTOR 10P		<JACK>			
H12	*1-564-522-11	PLUG, CONNECTOR 7P		J1901	1-565-931-11	TERMINAL BLOCK, S 3P	
S1	*1-565-513-11	PIN, CONNECTOR 2P		J1902	1-565-840-41	PIN JACK BLOCK 5P	
<IC>				J1904	1-565-838-11	JACK BLOCK, PIN 2P	
IC51	8-741-148-33	IC SBX1483-59		J1905	1-537-187-11	TERMINAL, PUSH (4P)	
<RESISTOR>				<NEON LAMP>			
R51	1-249-409-11	CARBON	220 5% 1/4W	NL901	1-519-108-99	LAMP, NEON	
R52	1-249-393-11	CARBON	10 5% 1/4W	NL903	1-519-108-99	LAMP, NEON	
<SWITCH>				<TRANSISTOR>			
S50	Δ 1-572-198-11	SWITCH, KEYBOARD (POWER)		Q900	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
S51	1-572-198-11	SWITCH, KEYBOARD		Q901	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
S52	1-572-198-11	SWITCH, KEYBOARD		<RESISTOR>			
S53	1-572-198-11	SWITCH, KEYBOARD		R900	1-247-804-11	CARBON	75 5% 1/4W
S54	1-572-198-11	SWITCH, KEYBOARD		R901	1-247-804-11	CARBON	75 5% 1/4W
S55	1-572-198-11	SWITCH, KEYBOARD		R902	1-249-405-11	CARBON	100 5% 1/4W
S56	1-572-198-11	SWITCH, KEYBOARD		R905	1-247-804-11	CARBON	75 5% 1/4W
*****				R906	1-247-895-00	CARBON	470K 5% 1/4W
*1-633-487-31	U2 BOARD	*****		R907	1-247-895-00	CARBON	470K 5% 1/4W
*4-341-752-01	EYELET (EY901-EY904)			R908	1-249-405-11	CARBON	100 5% 1/4W
<CAPACITOR>				R911	1-247-804-11	CARBON	75 5% 1/4W
				R912	1-247-895-00	CARBON	470K 5% 1/4W
				R913	1-247-895-00	CARBON	470K 5% 1/4W
				R914	1-249-417-11	CARBON	1K 5% 1/4W
				R915	1-249-417-11	CARBON	1K 5% 1/4W
				R916	1-247-895-00	CARBON	470K 5% 1/4W
				R917	1-247-895-00	CARBON	470K 5% 1/4W
				R918	1-249-405-11	CARBON	100 5% 1/4W
				R919	1-249-405-11	CARBON	100 5% 1/4W

U2 U1

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<SWITCH>				D421	8-719-911-19	DIODE 1SS119	
SW900	1-572-198-11	SWITCH, KEYBOARD (SERVICE SW)		<IC>			
<CONNECTOR>				IC402	8-759-710-68	IC NJM2245S	
U2-1	*1-565-491-11	CONNECTOR, BOARD TO BOARD 15P		IC403	8-759-710-68	IC NJM2245S	
U2-2	*1-565-491-11	CONNECTOR, BOARD TO BOARD 15P		IC405	8-759-980-43	IC TDA2009A	
U2-5	*1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P		IC444	8-752-053-17	IC CXA1114P	
*****				<COIL>			
*A-1394-219-A	U1 BOARD, COMPLETE			L400	1-410-473-11	INDUCTOR 18UH	
*****				<TRANSISTOR>			
*4-341-752-01	EYELET (EY401~EY403)			Q400	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
<CAPACITOR>				Q401	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C400	1-126-233-11	ELECT 22MF 20% 25V		Q402	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C401	1-124-477-11	ELECT 47MF 20% 16V		Q403	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C402	1-101-004-00	CERAMIC 0.01MF 50V		Q404	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C403	1-101-004-00	CERAMIC 0.01MF 50V		Q405	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C404	1-102-973-00	CERAMIC 100PF 5% 50V		Q406	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C405	1-124-477-11	ELECT 47MF 20% 16V		Q407	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C406	1-126-233-11	ELECT 22MF 20% 25V		Q408	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C407	1-126-233-11	ELECT 22MF 20% 25V		Q409	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C408	1-124-478-11	ELECT 100MF 20% 25V		Q410	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C409	1-126-233-11	ELECT 22MF 20% 25V		Q413	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C412	1-124-477-11	ELECT 47MF 20% 16V		Q414	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C413	1-124-478-11	ELECT 100MF 20% 25V		Q415	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C414	1-126-233-11	ELECT 22MF 20% 25V		Q416	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C415	1-126-233-11	ELECT 22MF 20% 25V		Q417	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C416	1-126-233-11	ELECT 22MF 20% 25V		Q430	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C417	1-126-233-11	ELECT 22MF 20% 25V		Q431	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C418	1-124-478-11	ELECT 100MF 20% 25V		Q432	8-729-423-37	TRANSISTOR 2SC3311A-QRS	
C419	1-101-004-00	CERAMIC 0.01MF 50V		Q433	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C420	1-126-233-11	ELECT 22MF 20% 25V		<RESISTOR>			
C421	1-124-478-11	ELECT 100MF 20% 25V		R400	1-249-421-11	CARBON 2.2K 5% 1/4W	
C422	1-101-004-00	CERAMIC 0.01MF 50V		R401	1-249-405-11	CARBON 100 5% 1/4W	
C426	1-126-233-11	ELECT 22MF 20% 25V		R402	1-249-429-11	CARBON 10K 5% 1/4W	
C460	1-126-320-11	ELECT 10MF 20% 16V		R403	1-249-417-11	CARBON 1K 5% 1/4W	
C461	1-126-233-11	ELECT 22MF 20% 25V		R404	1-249-405-11	CARBON 100 5% 1/4W	
C462	1-124-120-11	ELECT 220MF 20% 25V		R405	1-249-429-11	CARBON 10K 5% 1/4W	
C463	1-126-320-11	ELECT 10MF 20% 16V		R406	1-249-417-11	CARBON 1K 5% 1/4W	
C464	1-124-563-11	ELECT 2200MF 20% 25V		R407	1-249-417-11	CARBON 1K 5% 1/4W	
C465	1-106-220-00	MYLAR 0.1MF 10% 100V		R408	1-249-429-11	CARBON 10K 5% 1/4W	
C466	1-124-563-11	ELECT 2200MF 20% 25V		R409	1-249-405-11	CARBON 100 5% 1/4W	
C467	1-106-220-00	MYLAR 0.1MF 10% 100V		R410	1-249-417-11	CARBON 1K 5% 1/4W	
C468	1-136-173-00	FILM 0.47MF 5% 50V		R411	1-249-429-11	CARBON 10K 5% 1/4W	
C469	1-124-563-11	ELECT 2200MF 20% 25V		R412	1-249-405-11	CARBON 100 5% 1/4W	
C471	1-126-233-11	ELECT 22MF 20% 25V		R413	1-249-417-11	CARBON 1K 5% 1/4W	
C472	1-124-120-11	ELECT 220MF 20% 25V		R414	1-249-431-11	CARBON 15K 5% 1/4W	
C475	1-124-925-11	ELECT 2.2MF 20% 50V		R415	1-249-429-11	CARBON 10K 5% 1/4W	
<FILTER BLOCK>				R416	1-249-417-11	CARBON 1K 5% 1/4W	
CM1301	1-466-162-31	BLOCK, COM FILTER (CFB-4)		R417	1-249-417-11	CARBON 1K 5% 1/4W	
<DIODE>				R418	1-249-425-11	CARBON 4.7K 5% 1/4W	
D407	8-719-110-17	DIODE RD10ES-B2		R419	1-249-417-11	CARBON 1K 5% 1/4W	
D408	8-719-109-89	DIODE RD5.6ES-B2		R420	1-249-417-11	CARBON 1K 5% 1/4W	
D409	8-719-109-89	DIODE RD5.6ES-B2		R421	1-249-431-11	CARBON 15K 5% 1/4W	
D420	8-719-911-19	DIODE 1SS119		R422	1-249-417-11	CARBON 1K 5% 1/4W	
				R423	1-249-429-11	CARBON 10K 5% 1/4W	
				R424	1-249-425-11	CARBON 4.7K 5% 1/4W	
				R425	1-249-417-11	CARBON 1K 5% 1/4W	

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KV-27EXR20/27EXR25
RM-Y103 RM-Y104

U1

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R426	1-249-405-11	CARBON	100 5% 1/4W	<CONNECTOR>			
R427	1-249-405-11	CARBON	100 5% 1/4W	U1-1	*1-565-506-11	CONNECTOR, BOARD TO BOARD 15P	
R428	1-249-417-11	CARBON	1K 5% 1/4W	U1-2	*1-565-506-11	CONNECTOR, BOARD TO BOARD 15P	
R429	1-249-405-11	CARBON	100 5% 1/4W	U1-4	*1-564-505-11	PLUG, CONNECTOR 2P	
R432	1-249-435-11	CARBON	33K 5% 1/4W	U1-5	*1-560-124-00	PLUG, CONNECTOR (2.5MM PITCH)	
R433	1-249-435-11	CARBON	33K 5% 1/4W	U1-22	*1-565-494-11	CONNECTOR, BOARD TO BOARD 18P	
R434	1-249-413-11	CARBON	470 5% 1/4W	U1-23	*1-565-494-11	CONNECTOR, BOARD TO BOARD 18P	
R435	1-249-413-11	CARBON	470 5% 1/4W	*****			
R436	1-249-405-11	CARBON	100 5% 1/4W	MISCELLANEOUS			
R437	1-249-405-11	CARBON	100 5% 1/4W	*****			
R438	1-249-417-11	CARBON	1K 5% 1/4W	Δ.1-426-350-11	COIL, DEMAGNETIZATION		
R439	1-249-405-11	CARBON	100 5% 1/4W	Δ.1-451-275-31	DEFLECTION YOKE (Y28PFA)		
R441	1-249-405-11	CARBON	100 5% 1/4W	1-452-032-00	MAGNET, DISK; 10MM φ		
R444	1-249-414-11	CARBON	560 5% 1/4W	1-452-094-00	MAGNET, ROTABLE DISK; 15MM φ		
R445	1-249-414-11	CARBON	560 5% 1/4W	1-544-313-11	SPEAKER UNIT		
R446	1-249-414-11	CARBON	560 5% 1/4W	*1-556-945-21	CABLE, P-P		
R447	1-249-414-11	CARBON	560 5% 1/4W	1-561-306-00	JACK, PIN (F)		
R450	1-249-417-11	CARBON	1K 5% 1/4W	*1-565-514-11	SOCKET, CONNECTOR 2P		
R451	1-249-405-11	CARBON	100 5% 1/4W		(KV-27EXR25(U/C) ONLY)		
R452	1-249-405-11	CARBON	100 5% 1/4W	Δ.1-590-492-11	CORD, POWER (WITH CONNECTOR)		
R453	1-249-417-11	CARBON	1K 5% 1/4W	V901 Δ.8-737-753-05	PICTURE TUBE (A68JMT50X)		
R454	1-249-417-11	CARBON	1K 5% 1/4W	*****			
R455	1-249-417-11	CARBON	1K 5% 1/4W	ACCESSORIES AND PACKING MATERIALS			
R456	1-249-405-11	CARBON	100 5% 1/4W	*****			
R457	1-249-417-11	CARBON	1K 5% 1/4W	PART NO.	DESCRIPTION	REMARK	
R458	1-249-405-11	CARBON	100 5% 1/4W	1-562-443-11	CONNECTOR, ANTENNA		
R459	1-249-417-11	CARBON	1K 5% 1/4W	3-752-976-21	MANUAL, INSTRUCTION		
R463	1-249-405-11	CARBON	100 5% 1/4W	3-752-976-31	MANUAL, INSTRUCTION (KV-27EXR25(C) ONLY)		
R466	1-249-405-11	CARBON	100 5% 1/4W	4-384-027-01	BAG, PROTECTION		
R467	1-249-430-11	CARBON	12K 5% 1/4W	*4-397-920-01	CUSHION (UPPER) (ASSY)		
R468	1-249-430-11	CARBON	12K 5% 1/4W	*4-397-921-01	CUSHION (LOWER) (ASSY)		
R470	1-249-441-11	CARBON	100K 5% 1/4W	*4-397-922-01	INDIVIDUAL CARTON		
R471	1-247-883-00	CARBON	150K 5% 1/4W	REMOTE COMMANDER			
R475	1-249-413-11	CARBON	470 5% 1/4W	1-465-764-11	REMOTE COMMANDER (RM-Y103)		
R476	1-249-441-11	CARBON	100K 5% 1/4W		(KV-27EXR20(U) ONLY)		
R477	1-249-435-11	CARBON	33K 5% 1/4W	1-465-765-11	REMOTE COMMANDER (RM-Y104)		
R478	1-249-405-11	CARBON	100 5% 1/4W		(KV-27EXR25(U/C) ONLY)		
R479	1-249-405-11	CARBON	100 5% 1/4W	3-707-584-01	COVER, BATTERY (FOR RM-Y103, RM-Y104)		
R480	1-249-418-11	CARBON	1.2K 5% 1/4W				
R481	1-249-398-11	CARBON	27 5% 1/4W				
R482	1-249-421-11	CARBON	2.2K 5% 1/4W				
R483	1-249-381-11	CARBON	1 5% 1/4W				
R484	1-249-418-11	CARBON	1.2K 5% 1/4W				
R485	1-249-398-11	CARBON	27 5% 1/4W				
R486	1-249-421-11	CARBON	2.2K 5% 1/4W				
R487	1-249-381-11	CARBON	1 5% 1/4W				
R488	1-249-426-11	CARBON	5.6K 5% 1/4W				
R489	1-249-425-11	CARBON	4.7K 5% 1/4W				
R492	1-249-426-11	CARBON	5.6K 5% 1/4W				
R493	1-249-425-11	CARBON	4.7K 5% 1/4W				
R494	1-249-405-11	CARBON	100 5% 1/4W				
R495	1-249-421-11	CARBON	2.2K 5% 1/4W				
R496	1-249-421-11	CARBON	2.2K 5% 1/4W				
R497	1-249-405-11	CARBON	100 5% 1/4W				
R498	1-249-437-11	CARBON	47K 5% 1/4W				
R499	1-249-437-11	CARBON	47K 5% 1/4W				
R1400	1-249-435-11	CARBON	33K 5% 1/4W				
R1401	1-249-435-11	CARBON	33K 5% 1/4W				
R1402	1-249-435-11	CARBON	33K 5% 1/4W				
R1403	1-249-435-11	CARBON	33K 5% 1/4W				
R1406	1-249-405-11	CARBON	100 5% 1/4W				
R1407	1-249-405-11	CARBON	100 5% 1/4W				

KV-27EXR20/27EXR25

RM-Y103/Y104

SONY SERVICE MANUAL

CORRECTION-1

File this correction with the service manual.

US Model

KV-27 EXR 20

Chassis No. SCC-D50E-A

KV-27 EXR 25

Chassis No. SCC-D50F-A

Canadian Model

KV-27 EXR 25

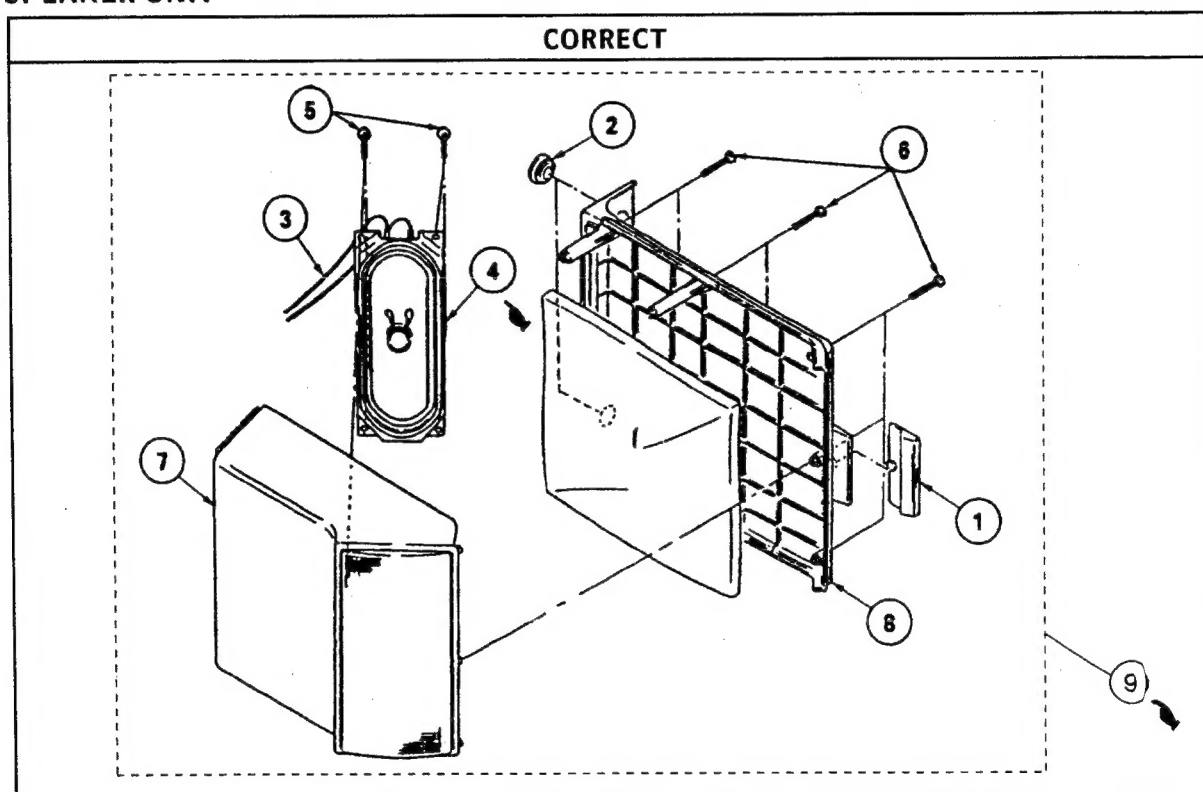
Chassis No. SCC-D61C-A

✖: Corrected portion

SECTION 7

7-1. CHASSIS

SPEAKER UNIT



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS		1	9-995-677-01	CUSHION-G, 28-72-11	
		*****		2	9-995-678-01	CUSHION-G, DIA 8-18-8	
				3	9-996-897-01	CORD, SPEAKER, ASSY	
				4	1-544-315-11	SPEAKER	
				5	9-995-683-01	VFT 2+3-16	
				6	9-995-684-01	VT 2+3-16	
				7	9-995-686-01	CABINET, TOP, ASSY	
				8	9-995-687-01	CABINET, BOTTOM, ASSY	
				9	1-544-313-11	SPEAKER UNIT	
9-996-897-01		CORD, SPEAKER, ASSY					
		SPEAKER					



9-964-655-91

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TV Group

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